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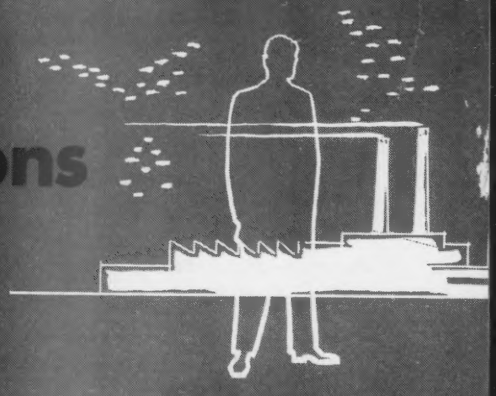
How to Improve Engineering-Management Communications

. . . answering penetrating questions about the engineer and his employer



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American Engineer

APRIL
1952

"Let us raise a standard to which the wise and the just may repair."

George Washington

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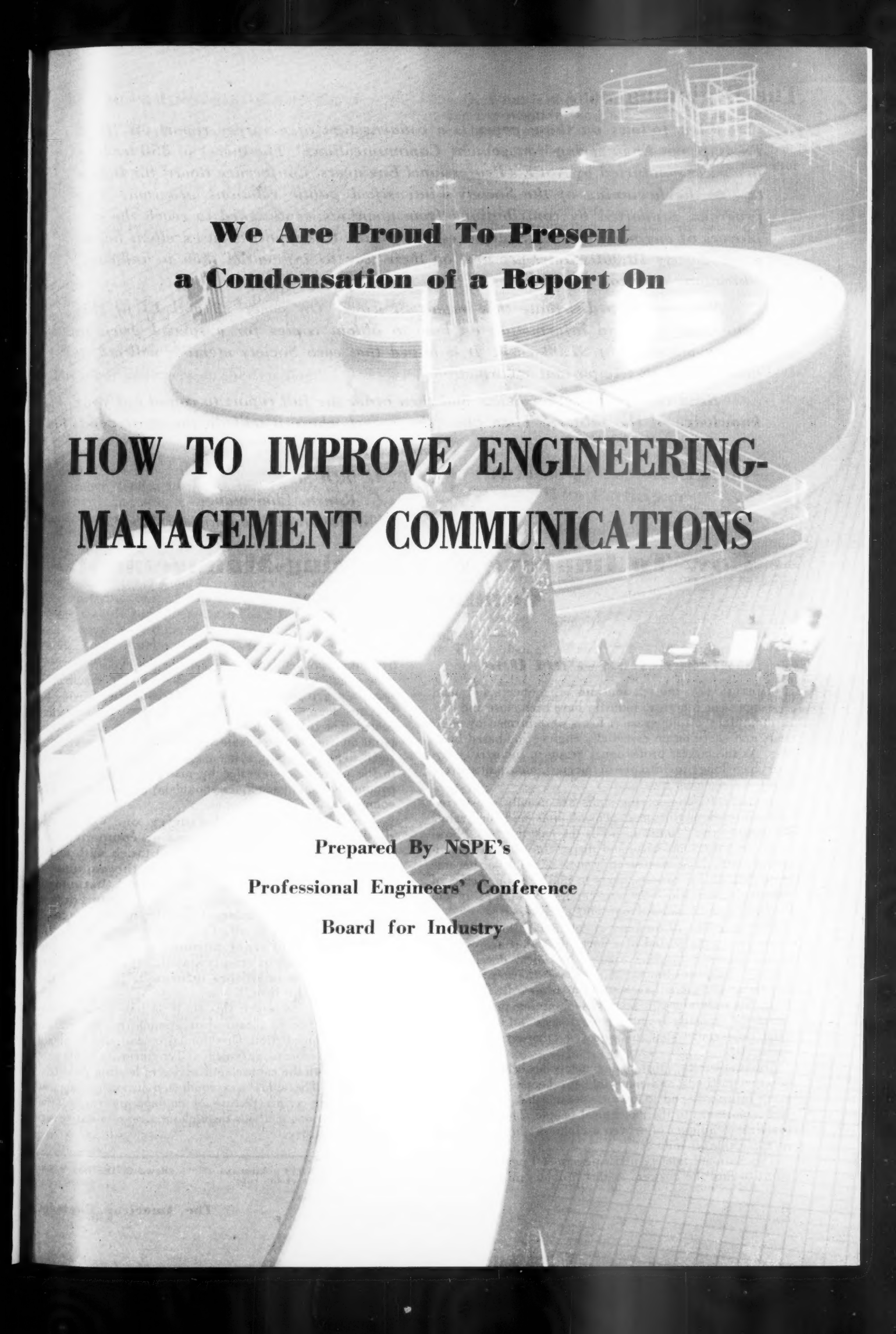


We Are Proud To Present
a Condensation of a Report On

HOW TO IMPROVE ENGINEERING-MANAGEMENT COMMUNICATIONS

Prepared By NSPE's
Professional Engineers' Conference
Board for Industry

The Beginning . . .

What follows on these pages is a condensation of a survey report on "How To Improve Engineering-Management Communications." The survey of 350 leading firms was conducted by NSPE's Professional Engineers' Conference Board for Industry, as the beginning of the Society's intensified public relations program. The program, supported by contributions from members, is designed to reach the employers of engineers with our messages. We think this report is an excellent beginning. Nearly 10,000 copies are now on their way to influential men in industry, education, and government.

You can help distribute this important work. On pages 12 and 13 of this issue, you will find information on how to obtain copies for a special price to Society members of $1.00 each. It is hoped that each Society member will aid in distributing this important information.

Read the condensation below and then order the full report to round out your knowledge of the subject. Then place the report where it will do the most good.

Sincerely,

/s/ C. G. ROUSH
C. G. Roush, Chairman,
Public Relations Committee, N.S.P.E.

How To Improve Engineering-Management Communications

— A Condensation —

Introduction—*Part One*

TRADITIONALLY, the relationships of engineers and management in American industry have been close and cordial. Many of our greatest firms were formed by engineers and carry on an essentially engineering-based business. As the largest professional group in industry, engineers have long provided one of the most important sources of top management men.

Accordingly, engineering staffs are usually considered well-informed on the management aims and long-range planning of their companies. For the past ten years, however, the size, complexity, and dispersion of typical engineering staffs have been steadily increasing. It has become more difficult for managements to maintain the bonds of communication which inspire confidence and bring out the best in cooperation from their engineers.

This loosening of the lines of communication has taken place during the period of a developing shortage of engineers and an increasing load of technical development work in industry. Industrial executives have recognized this trend and many have sought to reverse it. They have done this not only as a means of obtaining the best performance currently from their engineers, but as a permanent, progressive step in improved engineering-management relations.

The problem for most managements has been to develop effective methods and materials for keeping their engineers informed, and in turn, to learn what is of interest and importance to their technical people. The need is for practical techniques of proven usefulness which are broadly applicable in industry.

The National Society of Professional Engineers felt an effort to find the answers to this problem might be made by making available to management the experience of a wide segment of industry. This study is the result of a survey of a representative group of industries relying to varying degrees on engineering activities. It is not expected that the communications program of a huge corporation will be applicable in detail to, for example, a small firm using only a few engineers. But the approach to the problem as revealed by management attitudes on communications techniques should be useful both to big companies and to small ones.

For instance, during the survey, one Vice President of Engineering for a major company said, "How can I still keep in personal touch with all of our engineering departments with the amount of work I now have? I've just discovered that one of our plants is still pinning hopes on a program that headquarters lost interest in six months ago. I would like to talk to all of our folks but just can't." Presenting a different attitude, a manufacturing company president crisply stated, "It's up to supervision to keep engineers informed. Just send the word down the line."

The survey on which this study is based was nationwide, carried on by means of questionnaires, personal inquiry and consultation. Questionnaires designed to obtain information from management and engineering heads were prepared with the counsel and advice of leading industrial executives. The study was conducted in such a manner as to obtain a fair picture of engineering-management communications methods throughout a representative segment of industry.

EDITOR'S NOTE: Asterisks (****) shown in the text denote deleted portions of the copy.

Introduction—*Part Two*

Who Were Surveyed—And What They Do

Chapter Summary

Who replied?

- More than 350 companies
- They employ over 2,000,000 people
- They have 1,000 plants
- They are engaged chiefly in manufacturing

Who holds the top engineering job?

- Chief Engineer is the top position in most companies
- He reports chiefly to the top executive officer

How many engineers do they employ?

- More than 45,000
- Most of them do only engineering work
- The majority of non-technical jobs filled by engineers involve sales

COMPANIES all over the U. S., totaling more than 350 in number, replied to this survey. To identify them as to activity and size, a series of key identification questions were asked. These are the questions, abbreviated, and the cumulative answers:

Q. What does your company do?

A. Companies that replied are engaged in over 100 separate fields of production, design and engineering activity. These activities ranged from sanitary ceramic design work to the manufacture of half a million automobiles a year and thousands of different mechanical devices. Manufacturing, which employs the greatest number of engineers, was the largest single field of activity reported, accounting for 60 per cent of the replies.

Q. How many plants does your company operate?

A. Companies replying had from 1 to 200 plants. The total replies represented more than 1000 plants.

Q. How many people are employed by your company?

A. The number totaled 2,007,370, ranging from 20 to 200,000.

Q. How many engineers do you employ and what percentage of them spend the majority of their time on technical work?

A. More than 45,000 engineers are employed by these companies and 95 per cent of them spend the majority of their time on technical engineering work. The number of engineers employed by each company ranges from 5 to as high as 4,400 for one organization.

Q. Does your company employ young engineers for non-technical positions, and if so, for what types of work?

A. The majority of companies, 72 per cent, said that they did not use young engineers for non-technical work.

The 28 per cent who do use engineers in non-technical work listed the following non-technical positions filled by engineers:

General Management Including purchasing, production, administration, and general supervision	54 per cent
Sales & Merchandising	37 " "
Inspectors & Draftsmen	5 " "
Field Construction	2 " "
Accounting	2 " "

Q. What is the title assigned to your top engineering position, and what is the title of his immediate superior?

A. This question disclosed that the chief engineer is a mighty important executive. Companies replying said that 71 per cent of their chief engineers hold the top engineering positions. Vice Presidents of Engineering hold 18 per cent of the top jobs and Directors of Engineering 8 per cent. Miscellaneous titles such as Technical Director accounted for 3 per cent.

Additionally, this question disclosed that the top engineering executives reported to the head of the company in the majority of instances. Following is a percentage breakdown on this point:

Top Engineers Report To:	President	48 per cent
	Vice President	30 " "
	General Manager	13 " "
	Executive Vice President	9 " "

Chapter I

The Lines of Communication—Who Participates

Chapter Summary

Typical communications networks

- The "happy" circle system
- The "unhappy" efficient inverted "Y"
- How firms develop a particular system

What communications system prevails in industry?

- The pyramid or inverted "Y" is indicated
- The chief engineer is at the apex or control point
- The large bulk of engineers form the base of the pyramid and have little participation

Where do engineers fit in the communications system?

- Chief engineers enjoy widest participation in company planning
- Project engineers are also well integrated
- Engineering staffs are kept close to their technical work

Can improvements be effected?

- Broader participation by engineers in company planning wherever practical could improve engineering - management relations

RECENTLY, psychologists at the Massachusetts Institute of Technology conducted a group of significant experiments on industrial communications. Their object was to determine the effect of different kinds of communications networks on group performance.

In the experiments, two groups of people were arranged to represent two opposite types of organization. One group of five people was arranged in a circular pattern, communicating with one another as in Figure I. The other group was arranged in the hierarchical pattern of an inverted Y, shown in Figure II.

Both groups were given the same problem and told to solve it by exchanging messages.

The circular group had higher morale, but was not as efficient as the "Y" group. The central person in the "Y"

arrangement assumed the position of leadership and was happy but the other members lost interest. These results verified what experience in actual practice had shown. People at central points in a communications network tend to be the most satisfied while those on the fringes are likely to be more discontented.

To test the adaptability of the two groups, another experiment was performed in which both were given the same kind of problem as before. But this time, however, minor changes were periodically introduced into the proceedings. The results of this experiment showed that the more democratic, contented circular group had greater adaptive and survival powers. The inverted "Y" had become too specialized to adapt to rapid changes although they had been more efficient at a particular task.

This result again helped confirm the belief of some managements that more participation in company affairs will mean better performance. However, the tests also suggest that the best morale is not necessarily synonymous with highest efficiency.

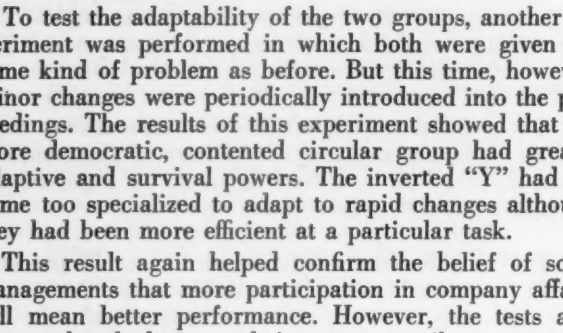


Figure I

By means of this communications pattern, often found in small companies and within individual departments of larger companies, work is accomplished less efficiently but each member of the group is "happier" and more adaptable to change.

Many companies have solved this dual problem of adaptability vs. efficiency and broad vs. centralized participation along the lines dictated by their industry. Stable organizations like public utilities require less flexibility, while firms in the intensely competitive consumer products field must be ready to adapt to shock and rapid change.

What The Survey Disclosed

To determine where engineers stand in relation to top management on this problem of participation, the NSPE survey asked what levels of engineering personnel participate in management planning on a series of important, everyday topics.

Figure III shows the percentage distribution of engineers who participate in planning on each topic.

In interpreting these results one fact becomes strikingly apparent. The Chief Engineer is the key figure in management-engineering communication and enjoys the broadest participation in company planning. Except for two areas, corporate organization and finance, the chief engineers of industrial organizations participate more broadly in company planning than do Vice Presidents in Charge of Engineering. Of course, in a number of companies the positions of Chief Engineer and Vice President of Engineering are combined as the top engineering job.

Project engineers also enjoy participation in management planning. Figure III shows that they figure prominently in planning on engineering matters, new products and processes, and purchasing.

Members of the engineering staff also are represented in planning in the majority of industrial companies. Figure III shows that individual engineers participate in engineering matters, new products and processes, and employee training. Percentage-wise they have negligible participation in other activities.

Conclusions

. . . the Survey shows relatively minor participation by engineering staffs in management planning. This indicates that managements have a fertile field for experimentation in improving engineering-management communication by broadening the base of participation. Since engineering staffs contain the bulk of all employed engineers, improvements in this area could do most toward developing better engineering-management relations. The most satisfied engineering employee will be one who knows what the company is trying to achieve, and how his individual efforts contribute to the results produced by the organization.

Chapter II

How Management Gets the Opinions of its Engineers

Chapter Summary

Do managements want the opinions of engineers on management problems?

- A large majority ask for them
- The Chief Engineer is the key figure in "upward" communications
- Project and executive engineers are consulted to a considerable extent
- Engineering staff people are consulted to a lesser extent

How do managements get opinions?

- Mostly by the verbal methods of conferences and meetings
- Impersonal methods are used to a very small extent

Do companies consider their present opinion gathering methods successful?

- A large portion are not satisfied
- Many companies are actively seeking improved methods

INDUSTRIAL managements have found that employees like to have their opinions sought. Virtually no one resents being asked for his opinion and advice. In fact, he is usually flattered and often will make useful contributions.

To determine to what extent managements make use of this prime communications tool, the Survey asked, "Does your company seek the opinions and suggestions of its engineering people on general management?" A majority of companies, 88 per cent, replied "Yes," while 12 per cent replied "No." These figures indicate that most managements have established—or have tried to establish—an "upward" channel of communications affording their engineers a means of expressing themselves.

An examination of the "No" returns revealed that they come almost uniformly from small organizations employing less than 25 engineers. For the most part these firms are engaged in extractive industries, i.e., oil, mining, or ore processing.

The Survey further asked what the company problems

were upon which the different engineering levels are invited to comment. The results of this inquiry are revealed in Figure III. The percentage distribution of participation, as in Figure IV, shows that the Chief Engineer is again the key figure. Except on the subject of Sales and Promotion, he has broader participation in "upward" communications than any other person in the engineering hierarchy.

Project engineers and engineering staff members have approximately the same relatively minor participation as in Figure III, showing that the pyramid scheme of authority and participation is consistent throughout most company organizations.

How Does Management Invite Participation?

The Survey asked how management gets the opinions and suggestions of its engineers on the subjects listed in Figure IV. The answers showed the following percentage distribution:

Conferences	40	per cent
Meetings	32	" "
Interviews	15	" "
Surveys	9	" "
Suggestion Boxes	4	" "

These returns demonstrate the wide use and apparent value of group get-togethers on company problems. The relatively negligible use of suggestion boxes indicates that when management desires the opinions of its engineers it expects them to be articulate and confident enough to seek the ear of higher authority.

Conclusions

It is apparent from the answers that the majority of managements want the opinions and suggestions of their engineering people on a broad range of company affairs. The very slight majority that is satisfied with present methods of obtaining this information indicates the need for improved techniques.

* * *

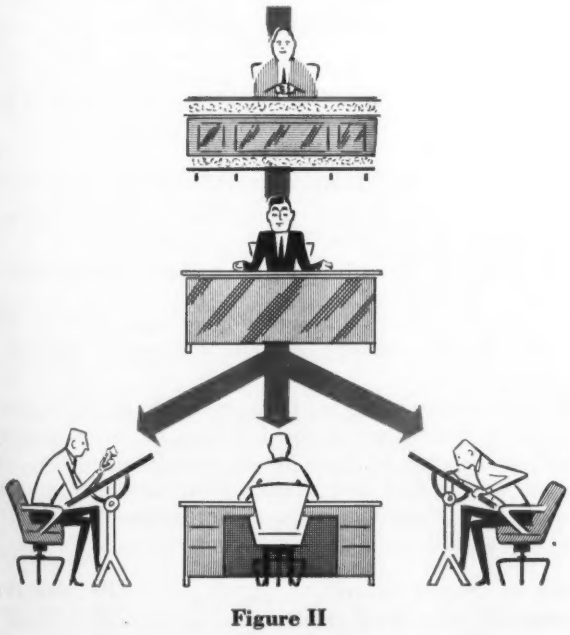


Figure II

An example of the inverted Y communications arrangement frequently found in industry. The executive at the fork of the Y has the position of authority and control of communications both up and down. The extent and nature of the information he permits to flow downwards often determines the morale of the lower echelons.

Figure III

These charts show how companies reported participation by their engineering people in management planning on a variety of topics.

TOPIC: *Strictly Engineering Matters*

Engineers who participate in planning	*Extent to which different engineers participate in planning in all responding companies*
Vice President in Charge	21%
Chief Engineer	36%
Project Engineer	25%
Engineering Staff	18%

TOPIC: *Corporate Organization*

Vice President in Charge	66%
Chief Engineer	29%
Project Engineer	3%
Engineering Staff	2%

TOPIC: *Finance*

Vice President in Charge	59%
Chief Engineer	31%
Project Engineer	6%
Engineering Staff	4%

TOPIC: *New Products and Processes*

Engineers who participate in planning	*Extent to which different engineers participate in planning in all responding companies*
Vice President in Charge	25%
Chief Engineer	38%
Project Engineer	23%
Engineering Staff	14%

TOPIC: *Employee Training*

Vice President in Charge	24%
Chief Engineer	41%
Project Engineer	19%
Engineering Staff	16%

TOPIC: *Purchasing*

Vice President in Charge	28%
Chief Engineer	39%
Project Engineer	22%
Engineering Staff	13%

TOPIC: *Plans for Expansion*

Vice President in Charge	33%
Chief Engineer	40%
Project Engineer	15%
Engineering Staff	12%

Figure IV

These charts show the extent to which companies seek the opinions and suggestions of engineers on various management topics.

TOPIC: *Engineering Subjects Solely*

Engineers whose opinions are sought	*Extent to which different engineers contribute opinions*
Vice President in Charge	22%
Chief Engineer	36%
Project Engineer	24%
Engineering Staff	18%

(*Figure IV continued next page*)

Figure IV
(continued)

TOPIC: *Product Design*

Vice President in Charge	23%
Chief Engineer	35%
Project Engineer	25%
Engineering Staff	17%

TOPIC: *Production*

Vice President in Charge	27%
Chief Engineer	37%
Project Engineer	21%
Engineering Staff	15%

TOPIC: *Sales and Production*

Engineers whose opinions are sought	*Extent to which different engineers contribute opinions*
Vice President in Charge	41%
Chief Engineer	32%
Project Engineer	14%
Engineering Staff	13%

TOPIC: *Customer Services*

Vice President in Charge	30%
Chief Engineer	34%
Project Engineer	19%
Engineering Staff	17%

Chapter III

What Engineers Want to Know About Management Policy

Chapter Summary

Do engineers ask about management policy?

- A large majority of companies report requests for information

What do engineers want to know about?

- Opportunity, expansion and new products claimed the greatest interest
- Security, benefits, and financial affairs claimed relatively little attention.

What opportunities do the interests of engineers present to management?

- Opportunity to stimulate the average engineer's interest in the economic facts of industrial life
- Opportunity to show engineers how their primary interests are served by overall company success

THE Survey asked companies if they receive requests from their engineers for information on management policy. A large majority, 86%, replied "Yes." The "No" reply was 14%. A study of the "No" returns showed that they come largely from small, non-manufacturing organizations.

The Survey then asked management to indicate on what subjects engineers most frequently requested information. The percentage results of the query are as follows:

Opportunities for Advancement	22%
Expansion Plans	17%
New Products and Processes Contemplated	14%
Technical Trends in Industry	9%
Competitive Standing	8%
Benefits and Security	8%
Sales and Earnings	7%
Sales Promotional Activities	5%
Corporate Organization	5%
Company Financial Status	5%

* * *

Chapter IV

The Media of Engineering-Management Communications

Chapter Summary

How do managements communicate with their engineers?

- Line of supervision is the predominant single method
- Personal discussion methods outrank all others
- Newsletters and seminars are used effectively in a number of companies

Do engineers receive any special communications attention?

- A majority of companies provide no special communications for their engineers
- Large companies do the most in specialized engineering communications
- A large majority of all companies take engineers into their confidence on special business situations which affect engineering

How can communications methods be improved?

- By providing special management communications channels to engineers where none exist
- Increase the participation of management men in meetings with engineers
- Supplement line of supervision communications with the effective conference method wherever possible

How managements communicate with their engineers can be as important as the information communicated. To discover what methods are in most frequent use, companies were asked how management messages are presented. The percentage frequency of different methods in use are as follows:

Line of Supervision	**30**	**per cent**
Personal talks by Executives	**28**	**" "**
Regular Engineering Conference	**23**	**" "**
Management Newsletters	**12**	**" "**
Engineering Seminars	**7**	**" "**

The majority of companies, 90 per cent, employ more than one medium of communication. The most frequent

combination includes verbal line of supervision communication, personal talks by executives and regular engineering conferences.

Newsletters

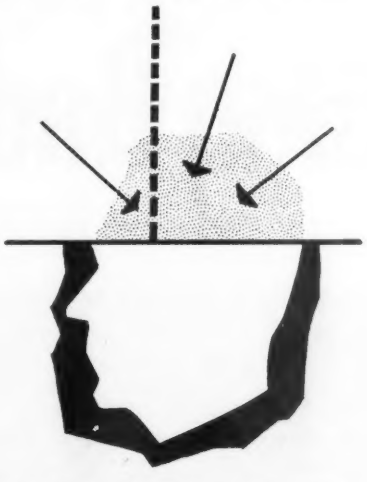
Management newsletters and engineering seminars are generally employed by medium-sized to large organizations. The newsletters are generally directed to supervisory employees and may contain material ranging from a friendly chat by the president to a detailed analysis of the company's financial position.

* * *

Seminars

A number of companies have found seminars uniquely suited to improving engineering-management relations. One such successful program by a major firm operates as follows:

Once a month, members of the engineering and research staffs meet after work for dinner in the company auditorium. Engineering and research staff members select speakers, plan the program and preside at the meetings. Following dinner, an executive from engineering, research, production, sales or some other department gives a talk on the nature of his work in relation to company operations in general and to the technical staffs in particular.



After his talk the speaker is usually questioned at length by those present, and provides new and valuable information to the entire group. Recent graduates and newly-employed engineers have found these meetings of great benefit. Longer-service technical people have used them to discuss and improve basic relationships, such as between production and engineering. General management is well pleased with results and has provided speakers from every level as they were invited.

Specialized Publications

To determine if and how engineers receive special attention on communications, the Survey asked, "Is your information program on management aims and long-range planning more comprehensive for engineers than for other employees?"

The replies showed that a majority, 63 per cent, did not provide special information while 37 per cent did.

* * *

The 63 per cent of companies which reported that their information programs were no more comprehensive for engineers than for other employees employ the bulk of all the engineers covered in this Survey. In these firms the number of engineers is usually small in comparison to the total of all employees. Specialized information for engineers in these companies comes down the line of supervision through meetings, directives and special reports.

* * *

Chapter V

Developing Management Potential in Trained Engineers

Chapter Summary

Do firms consider engineers potential managers?

- 92 per cent of companies look to engineers for managers
- 99 per cent of companies have managers who are engineers
- A large proportion of engineer-executives are licensed, professional engineers

Do companies inform their engineers of their future opportunities as managers?

- Most companies report no particular information plan on this subject.
- Companies who do advise engineers of opportunities do so during the introductory training program
- However, over 50 per cent of the companies have no formal training programs

How can engineers be better informed on their management opportunities?

- By company executives frequently spelling out how engineers can prepare themselves for management responsibility
- By less reliance on non-specific examples of advancement by which some companies expect engineers to observe and benefit
- Through the wider adoption of training programs especially prepared to integrate engineers with management and its problems

* * *

The Management Potential of Engineers

The Survey attempted to determine whether managements consciously look to their engineers as candidates for executive posts—and encourage them—or whether the process takes place without plan.

Managements were asked, "Does your company consider professionally trained engineers potential general management executives?"

The majority of companies, 92 per cent, replied "Yes." The minority, 8 per cent, which replied "No" were chiefly small firms in non-engineering fields, i.e., food, tobacco and novelty manufacturing. A few manufacturing companies qualified their "No" answer by saying that they looked for qualified people in all fields of specialization.

As a corollary question, the Survey asked each company how many of its executives are trained engineers. All but two companies replied that they had engineer-executives.

The proportion of engineer-executives to the entire executive staff ranged from more than 50 per cent for about a third of the companies to 100 per cent for 15 per cent of the firms. Several large manufacturers listed 50 or more management executives with engineering training.

The Survey also asked how many of these executives are licensed, professional engineers. The answers here ranged from 20 per cent, among the firms with more than half of their engineer-executives licensed, to 60 per cent among those firms with from one to ten licensed engineers.

(*Continued next page*)

Chapter VI

How to Improve Communications—Recommendations and Summary

Chapter Summary

Management Attitude Toward Communications

- Must want upward communication as a matter of policy
- Must recognize benefits of better morale and performance can come from good communications
- Must be prepared to conduct a program of improvement

How to Introduce Improvements

- What an "Engineering Audit" is and how to conduct one
- Importance of reviewing and testing present program
- Need for key engineering executive to take direction of program

Acting on Audit Findings

- How to introduce new media
- Gaining support of top management needed to effect change
- Finding strengths and weaknesses of present program

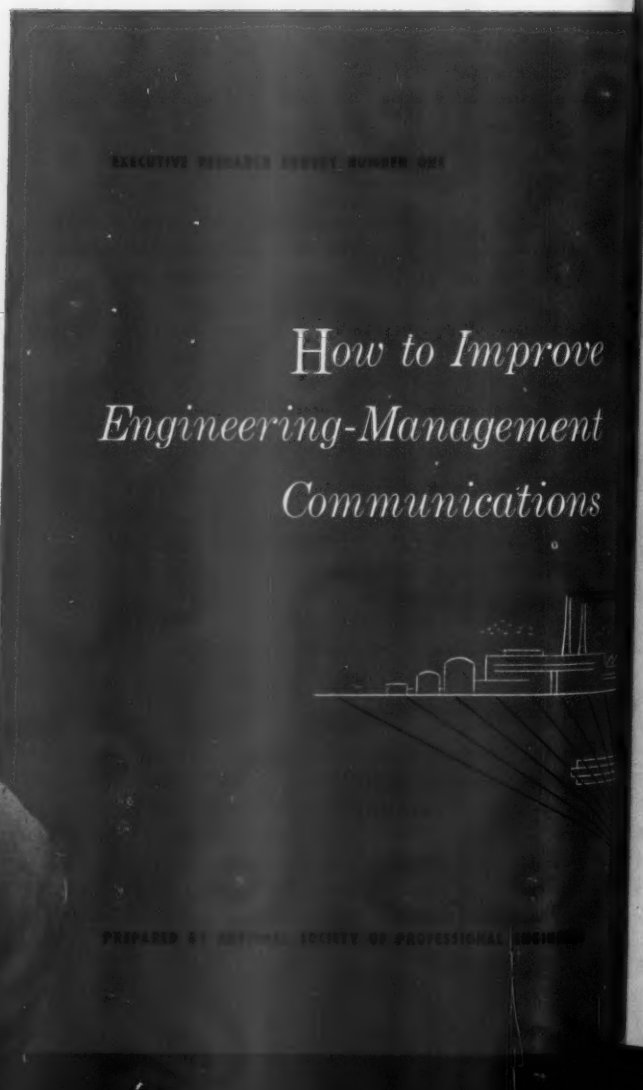
Improving Present Communications Methods

- How the new Phillips 6-6 technique works
- How to better conduct discussion meetings
- Importance of selecting right meeting leaders

Marks of a Good Communications Program

- Elements of good programs now in use in industry
- How more professional employees may be reached with management messages
- Importance of group meetings
- How management letters can be used
- Bulletin boards and their effective use
- How some companies use special publications
- Need to coordinate communications program—where help can be obtained

Are you getting through



RECENTLY, a leading U. S. firm set out to determine why ideas didn't flow upward to management as easily as orders flowed down. A study panel of management men was assigned the job of finding out what it takes to assure the company an effective way to get information from lower echelons. Specifically, their investigation was aimed at discovering what the barriers to communication are, how to remove them and how to select the best media for continued effective communications.

The findings of the panel put most of the blame for poor communications on management people. The panel found difficulty in convincing management people that getting information from subordinates is a genuine problem.

Discussing the authoritarian attitude of supervisors the panel noted, "Listening and acting on the basis of what subordinates think, not what we think, is absolutely essential to realistic management." If management doesn't first "dispel impatience with subordinates" and what they are saying, all its group meetings, written reports and individual praise will be useless.

* * *

The investigating panel reported that the worst of the problem is solved when *management understands that it bears the responsibility for poor communications and has the exclusive authority to effect improvements.* The first, and essential step in making improvement is an earnest desire on the part of management to try to understand the interest of its employees as people and to create a climate in which communication can flourish. With such a climate a host of personal and mechanical techniques and communications methods can be applied with good results. Without the proper climate all the techniques in the book are likely to fail.

Introducing Improvements

Assuming management sincerely wishes to improve communications with its engineers it can undertake a project of review and revision including the following steps: *(The complete report tells how to conduct the Engineering Audit.—Editor.)*

(Continued next page)

...up the Front Office?

IF you are the average engineer, you have only about an even chance of getting your ideas and opinions to the people who count. Why is this? What has happened to the days when executives and engineers really talked things over? Are engineers truly the "forgotten men" of industry?

THIS BOOK GIVES THE FACTS . . .

This book, prepared by NSPE's Professional Engineers Conference Board for Industry, recites the communications experiences of 350 top industrial firms. *How To Improve Engineering-Management Communications* is already recognized as one of the most outstanding pieces of engineering literature to be published in years.

LOOK AT THESE CHAPTER TITLES . . .

The lines of industrial communication—Who participates

How management gets the opinions of its engineers

What engineers want to know about management policy

The media of engineering-management communication

Developing management potential in trained engineers

How to improve communications—Summary and recommendations

For $1—a special ½-off price to NSPE members—you will receive answers you have been searching for. Here are facts and figures—a professional survey for professional men!

ORDER SEVERAL COPIES TODAY—GIVE THEM TO FRIENDS AND BUSINESS ASSOCIATES

(The reverse side of this coupon is blank)

National Society of Professional Engineers
1121 Fifteenth Street, Northwest • Washington 5, D. C.

Send ..... copies of the NSPE Research Report entitled *How to Improve Engineering-Management Communications* at the special NSPE price of $1.00 per copy.

NAME .....

STREET .....

CITY .....STATE.....

☐ *Payment by check or money order enclosed.*
☐ *Please bill me.*

1. Conduct an "Engineering Audit" to determine as accurately as possible how all members of the engineering staff feel about their present communications with management. Properly conducted, reported and applied, an audit can be the best guide for management on what engineers want to know about their company and how management can tell its story most effectively. More personalized than a poll or survey, an audit is the best way for each company to find the basis for a communications policy with its particular group of engineers. Once policy is determined for a specific group, a variety of communications techniques and methods may be employed.
2. Review present communications techniques and test their effectiveness. Engineering audit findings will be a pertinent guide as to whether or not present communications methods and media are effective. The views of the engineers on the receiving end of downward communications are management's only clues as to whether they are being heard and heeded. If meetings and conferences of engineers and management men are currently being held, but are not considered wholly satisfactory, new techniques and topics may be introduced. **(The complete report relates how to improve techniques.—Editor.)**
3. *Have a single top management man responsible for regular engineering-management communications.* Usually this man will be the Vice President of Engineering or Chief Engineer who, as the Survey determined, is the key figure in the communications network.

   The top engineering executive has the greatest stake in the improved productivity of his engineers through the better morale and more efficient supervision that improved communications promise.

* * *

Engineers and Public Relations

To determine the attitude of industrial firms toward their engineers engaging in public relations activities, the Survey asked if engineers were encouraged, and how, and what activities were suggested and supported.

A large majority, 92 per cent, of firms replying stated that they encouraged their engineers to engage in public relations activities. Also, the majority of companies replied that public relations participation is encouraged by an advanced management policy.

As the following lists will show, firms exhibit a generous and enlightened attitude toward engineering participation in public relations. However, the methods of communicating management's interest in having engineers participate in public relations appear inadequate in a large number of organizations. Some of the methods given are: "Bulletin board notices," "well-known policy," "by example," "individual initiative." These approaches cannot be considered the most effective and stimulating means of causing people to act.

* * *

General Suggestions on Company Operations

To determine if companies find their engineers interested in company operations outside of regular duties, the following question was asked: "Can you cite any instances in which the volunteered suggestions of engineers on subjects other than their specific assignment have been of value to your company?"

This question brought an unusual number of identical replies. Of those replying, 50 per cent said, "Too numerous to mention."

The specific examples cited ranged from a new design of watermark for a company's stationery to a saving of $100,000 per year for the organization. Several large companies in the electrical and machinery field reported that they had cash award, or war bond award, suggestion systems. Engineers participate in those systems with all other employees and have contributed many innovations outside their specified field of work.

Among the miscellaneous contributions of engineers' thinking to their company's operations the most frequently mentioned were labor-saving methods and standardization of routines. Purchasing improvements, expediting of sales inquiries, faster construction procedures and many other valuable suggestions were noted. The incidence of volunteered suggestions reported was spread about evenly over both large and small organizations. With the exception of the few companies using suggestions systems, engineers communicate their suggestions and recommendations through line of supervision or informally to the responsible authority.

Conclusions

Industrial firms show a very considerable use of executives who are trained, professional engineers. They also have more than ordinary interest in their engineers as potential future managers. However, the majority of companies have no specific methods of keeping engineers stimulated and aware of their opportunities in management.

* * *

(See Other Side)

Attractive window displays told Akron, Ohio, citizens about professional engineers.

The Memory Lingers On . . .

ENGINEERS' WEEK, 1952

Two months have passed but Engineers' Week, '52, continues to make news. Reports are still coming in but it is hoped that the stories that follow will include at least edited versions of all submitted. If we have missed you, please accept our apologies and won't you call the oversight to our attention? —*The Editors.*

ARIZONA SOCIETY

Governor Howard Pyle proclaimed Engineers' Week in Arizona. In the Tucson area the work was directed by Engineer Fred Jobusch, who used the entire Southern Chapter as a working committee. There was a daily broadcast on the Town Cryer program about engineers and engineering. "The Dream Builder" was also broadcast as well as spot radio announcements. Engineer Art Mann spoke at the Lions Club on Monday, Industrial Committee on Tuesday, and the Rotary on Wednesday. Many other speeches were given by prominent members of the Chapter. In Phoenix, Mayor Nicholas Udall proclaimed Engineers' Week. Engineer Reamy Fitch was Chairman of all activities and arranged for special radio and television shows. The local unit also appeared on the "Breakfast in Phoenix" program on the Liberty Network on Wednesday morning. James E. Hastain is State Chairman of the Public Relations Committee.

ARKANSAS SOCIETY

Engineers' Week was celebrated generally throughout the state and in Little Rock many local engineers made talks before civic groups. R. J. Rhinehart was in charge of the state celebration, and organized the extensive program that followed. The big meeting of the week in the Little Rock area was held during the afternoon of Washington's birthday. At this time a resolution was adopted offering the assistance of the Arkansas Society toward the proposed reorganization of the Arkansas Highway Department. Much worthwhile publicity was obtained because of this action.

CALIFORNIA SOCIETY

The East Bay Chapter arranged for window displays in downtown Oakland in Berkeley, radio time over KLX, in cooperation with John K. Chapel, nationally known news commentator, and newspaper publicity in the local papers. The window displays appeared in the show windows of the Kaiser Company, Western Electric, American Trust Company and others.

COLORADO SOCIETY

Engineer Gilbert B. Carter reports that activities in the Mountain State during the Week included the Annual Meeting of the Society, Engineers' Day at the U. of Denver, and the Highway and Building Conferences at the U. of Colorado.

The Governor of Colorado and the Mayor of Denver issued official proclamations highly praising the profession. Very successful publicity was obtained

Above, left: An Engineers' Week display in Ft. Wayne, Ind. Right. In Miami, Fla., the mayor signs a proclamation. L. to r. are: Jules P. Channing, State Chairman, Engineers' Week, and Pres., Miami Chapter, FSPE; Chelsie J. Senerchia, Mayor of Miami, a professional engineer; E. A. Anderson, Nat'l. Dir., NSPE and County Engineer, Dade County; and J. J. Bennett, Pres., Professional Engineers' Association of Southeast Florida.

through seven show windows in the downtown area of Denver. A special poster was devised and used in public places including the window displays.

DELAWARE SOCIETY

The radio show, "A Leap in the Dark," was given over station WDEL on Monday, February 18th, and followed on Thursday with a radio show on WDLTV, featuring Clarence Evans, President of the Delaware Society. Public displays were placed in many buildings throughout Wilmington, including a number of schools. All trolley cars carried special flags honoring engineers. Governor Albert N. Carvel, issued a special proclamation, as did James F. Hearn, Mayor of the city of Wilmington.

DISTRICT OF COLUMBIA SOCIETY

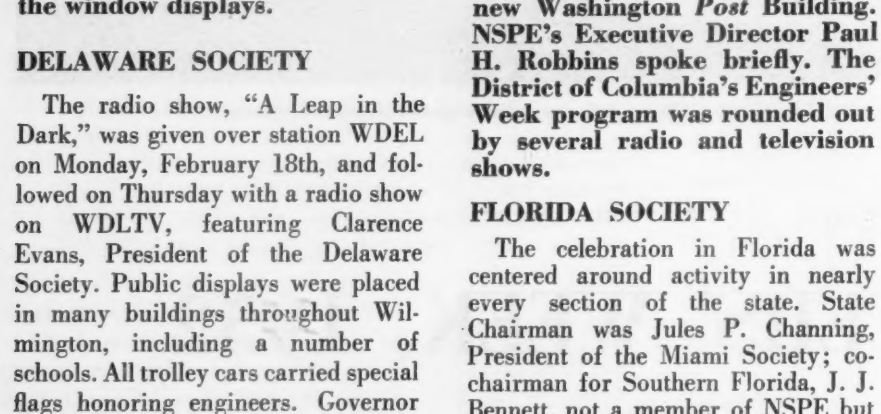
On Monday evening members of the District Society visited the new Washington *Post* Building. NSPE's Executive Director Paul H. Robbins spoke briefly. The District of Columbia's Engineers' Week program was rounded out by several radio and television shows.

FLORIDA SOCIETY

The celebration in Florida was centered around activity in nearly every section of the state. State Chairman was Jules P. Channing, President of the Miami Society; co-chairman for Southern Florida, J. J. Bennett, not a member of NSPE but President of the Professional Engineers Association of Southeast Florida; Chairman for Gainesville and Jacksonville was John Kiker, State Vice President of the Florida Society.

Highlights included two banquets, one in Miami and attended by 260 engineers, architects and city officials. Mayor Chelsie J. Senerchia, was guest of honor. Another banquet held in Gainesville which includes the Jacksonville area, was attended by 150 guests. Radio activities of the Miami Chapter included 15 minute radio programs on February 16, February 18 and February 23, plus spot announcements throughout the Week on about 6 local stations.

Public speaking talks were given to three Rotary clubs and to four Kiwanis clubs during the Week.



James J. Lyons, Borough President, proclaiming the Week in the Bronx, N. Y. Seated, l. to r.: Arthur V. Sheridan, P. E., Commissioner of Borough Works; Edward B. Fitzpatrick, President, Bronx County Chapter, NYSSPE; and Borough President Lyons. Standing, l. to r.: Kenneth A. Epstein, P. E., Chairman Engineers' Week Committee; and Daniel J. O'Connell, P. E., 1st V. Pres., Bronx County Chapter, and Professor at Manhattan College.

INDIANA SOCIETY

Engineers' Week in Fort Wayne was sponsored by six engineering societies. The Week was proclaimed by Governor Schricker and then Mayor Harry W. Baals of Ft. Wayne. Next, a specially designed poster was distributed with nine local industries utilizing them in displays. Exhibits by industry were also used in high schools with speeches about the profession being given to the students.

The local transit company carried an Engineers' Week car card in all of its coaches. Radio was used frequently with two special fifteen minute programs being held plus many spot announcements.

MARYLAND SOCIETY

The Honorable Theodore R. McKeldin, Governor of Maryland issued a proclamation designating Engineers' Week as did the Mayor of Baltimore, Thomas D'Alesandro, Jr. National Director O. W. Turpin reports. Various television stations were utilized including station WMAR,

Above, left: Gov. C. Elmer Anderson of Minnesota signs a proclamation. Standing, l. to r.: Ned Brandt, Sec'y. to Mayor Hoyer of Minneapolis; Edward K. Delaney, Mayor of St. Paul; Charles W. Britzius, Pres., Minneapolis Chapter, MSPE; W. L. Hindermann, V. Pres., MSPE; Prof. James J. Ryan, Pres., St. Paul Chapter, MSPE; and N. Ted Waldor, V. Pres., St. Paul Chapter, MSPE.

Above, right: Officers and members of the St. Louis Chapter, Missouri Society of Professional Engineers look on as Mayor Joseph M. Darst signs the proclamation designating Engineers' Week in St. Louis. From l. to r. in back of the Mayor are: J. C. Parmely, Secretary of the local chapter; Col. Malcom Elliot; E. S. Rehagen; Frank Kriz, City Director of Streets and Sewers; Brice R. Smith, Sverdrup and Parcel; Conway B. Briscoe, City Director of Public Utilities; Chas. M. O'Brien, Better Business Bureau and President of the St. Louis chapter; and John T. Heard, Sr.

which broadcast the proclamation as part of its news program on Friday, February 15.

The Week's celebration started out in Maryland with a 15-minute television program on Sunday night, February 17 over station WMAR, the program titled "Is our American Standard of Living in Danger?"

A regular dinner meeting was held on February 19, with Governor McKeldin as honored guest. Another television show was held on February 21 over station WAAM. This latter television program included President O'Donnell of the Society acting as moderator with two outstanding engineering educators in Maryland on the panel. The educators were Dr. William M. Kowenhoven, Dean of the School of Engineering of Johns Hopkins University, and Dr. S. S. Steinberg, Dean, College of Engineering, University of Maryland.

MICHIGAN SOCIETY

About ninety special Engineers' Week posters were distributed to large engineering firms in the Detroit area. Mr. Paul Calkins, President-elect of the Michigan Society, appeared on the program "Press Conference" a feature of station WXYZTV on Sunday, February 17. Wednesday night, February 20, Mr. Bert Robb, admiralty attorney of Detroit, spoke on the subject of the St. Lawrence Seaway. Mayor Albert E. Cobo issued a proclamation designating the Engineers' Week.

MINNESOTA SOCIETY

The city of Duluth celebrated Engineers' Week with a proclamation by Mayor George W. Johnson and a speech by City Attorney Harry Weinberg. The attorney told the Arrow Head Chapter, that they should consider recommending government action to exempt from the armed services, draft students with an aptitude for engineering.

As the Mayor signed the proclamation for Engineers' Week, City Engineer Arthur Tews, a past president of the Arrow Head Chapter, presented a wooden hatchet to the mayor as a symbol of the earliest American serving instrument. The hatchet was also billed as "a facsimile of the one used by Washington when he chopped down the cherry tree."

The Minneapolis and Capitol Chapters of the Minnesota Society, did a great deal of work in connection with publicity for Engineers' Week. Mayor Eric G. Hoyer of Minneapolis, Edward K. Delaney of St. Paul and the Governor of the State, Mr. C. Elmer Anderson, all signed Engineers' Week proclamations.

MISSOURI SOCIETY

Heading the list of proclamations of Engineers' Week was Governor Forrest Smith, who proclaimed the Week. In St. Louis, Mayor Darst signed a proclamation. Another highlight in St. Louis was the telecast by Engineers Brice R. Smith, Frank Kriz, and Col. Malcolm Elliott over KSD-TV on February 17. They discussed the St. Louis-St. Louis County Expressway Plan.

In the Western Chapter, Mayor Kemp of Kansas City again proclaimed the Week in recognition of the engineering profession. Three radio and television broadcasts were made by members of the Chapter during the Week. Past President C. G. Roush, spoke on February 19. Ernest E. Howard was on a telecast on February 20. A radio panel discussion was presented by President Lytle, K. H. Larkin, and A. C. Kirkwood.

Former President Herbert Hoover's

Below, left: City Engineer Arthur Tews, right, presents to Mayor George W. Johnson a wooden hatchet, a "symbol of the earliest of American surveying instruments," following the signing yesterday of a proclamation by the mayor designating "Engineers' Week" in Duluth. From left, are: Commissioners E. A. Bodin and C. H. Barnes, Mayor Johnson, Commissioner C. D. Goldsmith, Commissioner Ralph G. Fiskett and Tews, a Past President of the Arrowhead chapter, MSPE.

Below, right: Rhode Island Gov. Dennis J. Roberts signs proclamation. L. to r. are John V. Keily, Past President, RISPE; Arthur Mather, Jr., Nat'l. Dir.; Robert B. Strong, Past President; Vincent DiMase, Past President; Frederick H. Paulson, President; and Domenico A. Ionata, V. President and Chairman, Public Relations Committee.

telegram to Public Relations Committee Chairman Earl F. Dunkle is published.

1952 Feb 12 8 18 PM
"New York N. Y. L 12
Earl F. Dunkle
718 East Armour Blvd.
KS City

The Engineer has the fascination of watching a figment of his imagination emerge with the aid of science to a plan on paper. Then it moves to realization in cement, metal or energy. Then it brings new jobs and homes to men. Then it adds to the security and comfort of these homes. That is the Engineer's high privilege among professions. It is this which inspires our profession and has placed it as a most vital force in our nation.
Herbert Hoover."

A special program was presented at the meeting of the Western Chapter on February 21. Col. William M. Spann was awarded a certificate of merit in recognition of the contribution that he has made to his community, his country, and to his profession. Major General William J. Staton and Bruce Williams, Chairman, State Registration Board for Architects and Professional Engineers, told of many of Col. Spann's professional, military, and civic services.

There was also a special meeting of the Engineers' Club of Jefferson City at which time the Mayor's proclamation was issued.

Southwest Chapter's proposed activities for the Week were reported by Committee Chairman George Irey. These include radio announcements, newspaper releases, speeches before civic clubs and groups, high school groups, and window displays.

The climax of Engineers' Week in Jefferson City was reached with a luncheon meeting of the Jefferson City Engineers' Club at the Missouri Hotel. Mayor Arthur W. Ellis, a guest, read his proclamation of Engineers' Week and was presented with an honorary membership in the Club. Feature speaker at the meeting was Fount Rothwell, who, in his talk, urged that engineers take a positive attitude about obtaining peace rather than seeking to gain peace through the prevention of war.

NEBRASKA SOCIETY

Engineer George E. Miller, President of the fledgling Nebraska Society, reports that it obtained good publicity throughout the state during National Engineers' Week. Governor Val Peterson proclaimed Engineers' Week as did the Mayor of Omaha. The radio script "The Dream Builder" was presented on radio and numerous spot announcements were also secured. The state looks forward to an even greater program next year.

NEW MEXICO SOCIETY

Engineer C. E. Barnhart, President of the New Mexico Society, developed plans for Engineers' Week. State branches of ASCE, ASME, AIEE and AIMME, cooperated in the program.

NEW YORK STATE SOCIETY

City Manager Morris M. Cohn of Schenectady tied-in the appointment of an engineer to a special city planning commission with Engineers' Week. The man appointed was NSPE member, Everett S. Lee. Other activities in Schenectady included a special religious talk by Reverend Daniel Brink discussing the religious aspects of the engineering profession, followed by a TV show on WRGBTV dealing with engineers in civil defense. Another show on station WSNY dealt with women in the engineering profession. On Thursday, over station WRGBTV, well-known Prudence Penney interviewed women in the engineering profession. On Thursday, February 21 there was a combined AIEE, ASME meeting which discussed the power industry. General Electric's general office news carried a two page pictorial article on engi- was in charge of the program.

In New York City, Mayor Vincent neers on February 21. Mr. T. Dietze R. Impellitteri, issued a special proclamation for Engineers' Week as did Governor Thomas E. Dewey. The Mayor said in part "We owe so much to the comparatively few who make up the engineering profession." A highlight of Engineers' Week was a broadcast over radio station WMYC in which Public Works Commissioner Frederic H. Zurmuhlen, Charles Molineaux, President of the State Society, John Riedel, Chief Engineer of the Board of Estimate, and Mr. John Walsh, Chairman of the State Society's public relations committee participated. All are members of the Society.

The Bronx County Chapter of the New York State Society participated in the nation-wide observance of Engineers' Week.

Hon. James J. Lyons, President, Borough of the Bronx, proclaimed Engineers' Week. On Feb. 20, the Chapter joined the celebration by having a special program "Engineers In Review" over Fordham University Radio Station. Those who participated in the discussion were: Edward B. Fitzpatrick, President of the Chapter; Daniel J. O'Connell, 1st Vice-President; and Brother Joseph, head of department of Civil Engineering at Manhattan College.

With the cooperation of the other four chapters in the Metropolitan Area, a story about Engineers' Week was published in the Sunday New York *Times*, Feb. 17.

The Engineers' Week Committee was under the chairmanship of Kenneth A. Epstein, Public Relations Officer. Other members of the Committee were Engineers George J. Kaye,

(*Continued on page* 31)

Colorado had its Annual Meeting during Week. Here are new officers, 1952-53. Front row, l. to r.: Howard A. Lane, President Elect; George C. Hahn, V. President; Hugh W. Hemple, President; Orley O. Phillips, Director, and George C. Hanson, Sec'y. Back row: Lisle V. Wilson, Director; Alfred J. Ryan, Nat'l. Director; Alvin O. Swanson, Treasurer; and Ralph W. Becker, Director.

Front row, l. to r.: Perry Ford, Past President, NSPE; NSPE President-elect John D. Coleman; V. Pres. T. Carr Forrest, V. Pres. John F. Reynolds, President L. L. Dresser, Immediate Past President Sidney L. Stolte, V. Pres. C. G. Roush, V. Pres. George J. Nicastro, Treasurer R. B. Allen, and Past President Alex Van Praag, Jr. Second row: State Presidents H. P. Mathieu, Texas; S. Warth, Fla.; C. H. Evans, Delaware; D. A. Ionata, R. I.; C. B. Molineaux, N. Y.; R. L. Sweigert, Ga.; D. H. Pletta, Va.; K. D. Harrington, Calif.; and Vice Pres.-elect, Clarence T. Shoch. Third row: State Presidents H. J. Engstrom, Ark.; A. Hernandez, P.R.; R. C. Clark, Wisc.; A. D. Spicer, Ill.; E. K. Nicholson, Pa.; R. H. Myhra, N. D.; E. G. Hinshaw, Ind.; and P. H. Robbins, Ex. Director, NSPE. Fourth row: Nat'l. Dir. C. O. Mannes, Wash.; and State Presidents C. M. Lytle, Mo.; E. Larsen, Ohio; R. A. Freese, Pres.-elect, Ohio; B. E. Ryan, Ark.; J. E. Painter, Idaho; A. Pratt, Kansas; and M. E. McGeady, Md. Last row: C. E. Doell, Minn.; J. D. Carpenter, Pa.; C. E. Barnhart, N. Mex.; L. B. Allen, Tenn.; J. Griffiths, Neb.; and H. W. Hempel, Colo.

Not shown in photo but attending: State Presidents E. J. Panish, Conn.; R. E. Argersinger, Mass.; P. S. Calkins, Mich.; G. Von Tobel, Nevada; and Frank C. Mirgain, N. J. *—Photos by Jo Godley, P. E., Cleveland SPE*

Unity, Membership, Public Relations, Receive Top Attention of State Presidents

UNITY in the engineering profession, membership, public relations and interprofessional relations were the four subjects that received top attention by the State Presidents when they held their Annual Meeting at Cleveland, March 13-15.

Professional unity, reported upon by Alex Van Praag, Jr., Decatur, Ill., NSPE's representative to the Exploratory Group for Greater Unity in the Engineering Profession, explained the steps leading to the issuance of the Group's December 15, 1951, report, and why the Society dissented and submitted a minority report. (*See March, American Engineer*).

Several of the State executives in attendance reported upon the attitude toward unity in their own locale, and expressed an opinion that "few NSPE organizations would be satisfied with a unity group that did not give full importance to the desires of the individual."

Mr. Van Praag stated that "it is too early to take final action. The rank - and - file engineers across the country should be informed of what is going on so that they can intelligently make up their minds as to what sort of a unity organization they desire."

Turning to membership, the officials heard NSPE Membership Committee Chairman Harry G. Kennedy of Charleston, W. Va., present a call for a vigorous membership campaign.

Noting that the full committee had recently met in Washington, D. C., to iron out membership problems, the Chairman warned that the final success of any program would depend upon the "follow through" at the Chapter and State levels. Kits containing helpful material are now being prepared and will be sent to those responsible for membership in the near future.

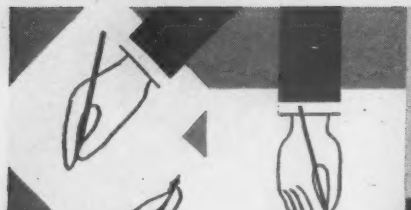
"Membership is the Society's supply of oxygen," Mr. Kennedy emphasized. "Without members we do not grow, and unless we grow we are not doing our duty of serving the profession and raising it to the standards we feel it should have."

With the preview release of the Report on "How To Improve Engineering - Management Communications" (*see page* 5), the Society's special public relations program was opened for discussion.

Committee Chairman C. G. Roush explained how the Report was being distributed to upwards of 10,000 leaders in industry, government and education, and that the Nation's press was being fully covered.

"Stories telling of the importance of the Report have already been scheduled for publication in *Chemical and Engineering News*, the New York *Times*, *Business Week*, and others," Roush said. "We are going to make sure that everyone hears about the

(*Continued on page* 30)



Professional POSTSCRIPTS

This is your department. Your contributions to it are solicited. We want your views on subjects that affect the engineering profession directly or indirectly. Please keep your contributions short, and remember that editing may be necessary to conserve space. Your name may be omitted if you desire. — *The Editor.*

Welcome, aboard! This is our second trip out and we think we've got a couple of items you'll find worth reading. We must admit that space is very limited this month, and that we promise you a greater variety in the future, but we're sure you'll be interested in the words of our guests. First, let's meet

Professor F. T. Mavis,
Professor and Head,
Dept. of Civil Engineering,
Carnegie Institute of Technology,
Pittsburgh, Pa.

Professor Mavis presents an educator's viewpoint on that lively subject, the shortage. But why waste time, here is Prof. Mavis and a piece he has titled "Let's Talk Plain."

"Our security depends on our capacity to out-plan, out-produce, and out-deliver all who would challenge our ideals. It depends on teamwork in research, in production, and in the exchange of goods and services.

"Research is the business of scientists; adequate and economical planning, production, and delivery-on-time is the business of engineers; free exchange of goods and services is the business of the market place where products of farm and industry change hands profitably. On these we depend for life as we know it and want it to be. If you can't get what you *want*—and if your boy in Korea or elsewhere can't get what he *needs*—it's bound to get worse unless we *stop wasting* trained mind-power and *start training* more engineers and scientists *now*. Everyone of us has stock in the kind of engineering and science that keeps our living standard from running down, from being torn down, from being undermined. Each one of us who would be free shares in that wealth of brains and gumption that finds new and better ways to produce better things easier and cheaper. Just now our investment in engineering and science is in danger—and I say, 'Let's talk plain.' What can you and I do?

"They say 26,000 engineers will graduate in June, 1952; possibly 17,000 in 1953, and only 12,000 in 1954. *Compare* these figures with 51,000 graduated in 1950 and 42,000 in 1951. *Remember* that most of these men made their selections from job offers before commencement and there weren't enough graduates to go around. *Judge for yourself* whether good engineers and scientists will be needed in the years ahead. I'll say more about this before I finish talking.

"Why this shortage now? One reason: two or three years ago when freshmen should have been entering engineering schools in *larger* numbers, word got around that engineers would be a drug on the market, and this bad guess was corrected too late to do any good. What's more, any high school graduate can flash a fat pay check *today*—and some can't pass that up for a freshman's dink. Another reason: Armed forces are wasting engineers and scientists by assigning them to jobs that other men can do just as well — meantime leaving the critical shortages in engineering and science to be filled by inferior or unqualified people.

"Who says so? Read the article, 'Let's Make the Draft Make Sense,' in the September 15 issue of *Saturday Evening Post* by Admiral Ben Moreell, Civil Engineer Corps, USN, Retired, who is Board Chairman and President of Jones and Laughlin Steel Corporation. Read also: 'A Helluva Shortage of Engineers,' by Lawrence P. Lessing in the September *Fortune* Magazine. Look around a little yourself.

"Will opportunities last? Will good engineers and scientists be 'a dime a dozen' when we stop concentrating on *both* bombs and butter? Our survival as a nation, our standard of living, and our very lives depend on an advancing technology that progressively demands more and better engineers and scientists. Structures, products, services, transportation . . . are becoming more and more technical. Electric power is expanding faster than ever; the chemical industry can't begin to meet its demands; air transport and communication is expected to work new wonders every year; adequate land and water transportation means building and maintaining better railways, highways, waterways, and pipelines; people and land and industries need water—under control. Construction and reconstruction is not only our greatest and most diversified industry—it survives or America dies with it. This means we must discover and improve materials, and methods of delivering and using them economically for the convenience *and survival* of free men. Certainly there are needs and opportunities for engineers now, and beginning salaries are inflated because technical men are so scarce . . . but will it last?

"Suppose we have more inflation . . . or another depression? What of the need for engineers and scientists then? If 'we' produce profitably just about enough of everything 'we' want, and if 'we' deliver it to the market place at a price in goods and services that 'we' are willing to pay, 'we' have neither inflation or depression. (If *you* and *I* could fit comfortably into *every* 'we' in the last sentence we would have no labor troubles either!) It is the business of engineers and scientists to find new and better ways of producing things that are scarce; to find ways of converting a surplus *here* into meeting a demand *there* without needless waste; and to make the hauling interchange between producer and consumer profitable to both. Engineers and scientists can't lick inflation or depression alone—but inflation and depression cannot be licked without them. There will be need for good engineers who have their share of resourcefulness and gumption. And those who are prepared to meet a need usually receive a corresponding share of return in money and other satisfactions. (This is improving, too.) Experience of versatile civil engineers in peace, in war, and in depression is evidence: Roughly, every other graduate advances from technical work to admin-

istration and management—and one out of twelve advances to the rank of a consultant.

"Look at engineering today through the eyes of a 1949 graduate who wrote this to me last winter: 'The two years since I was graduated have been good ones. There has been plenty of hard work, six days weekly and some nights, and never a day off . . . but the recompense has been satisfactory, more than satisfactory. Not money, but the fierce joy of starting a job and fighting the thing through, over troubles that sometimes seem insurmountable.' He *earns* good money, too—and that's not unusual.

" 'WHAT CAN I DO?' Let me suggest three things: *First,* check up on some of these things I've told you—and let me know if you find anything wrong. *Second,* think of any engineer in military service who is not doing an engineer's job that taxes his capacity — and if you can think of *any,* write to your representatives in Washington immediately and give them all the dope. But give it to them in a nice way — fully, factually, fairly. Your Congressman, your Senators, and your President are responsible to you for safeguarding your money, your manpower, your mind-power . . . and *your* United States that you entrust to them. You have entrusted to them the *right* to *use*—but not the *power* to *misuse* — both *man*power and *mind*-power to 'provide for the common defense.' Today, the one thing that no potential enemy has is the quality of mind-power and the spirited teamwork that has been developed in engineers and scientists. Their power to discover new weapons and new defenses, and their capacity to plan and to direct production and delivery of *enough-on-time* is our most versatile 'secret weapon.' We must stop misusing it! We must put it to work in the research, training, production, and supply lines if the men on the fighting line are to get the *best* of *what* they need *when* they need it. *Third,* if you share my views, pass along the word that no one has better opportunity to help produce real wealth and security than a *good* engineer or scientist—and that he shares in the wealth and security he helps to create. A young man, or woman, who is qualified to enter a good technical college, brings some good with him; by the time he graduates, he has developed it further; and by continuing a study after he leaves college he can wrestle successfully with any competitor.

"THIS IS OUR JOB, as I see it: *First,* to *teach* your sons and daughters by our example and to help them *learn* to become the *best* and *best balanced* men and women they can —as professional men, as responsible citizens. *Second,* to *explore,* within our fields, more worthwhile secrets that Nature has always had, and to *direct* our findings into new channels that may add a little to man's use and convenience — that is *research* and *engineering. Third,* to *consult* with men in industry, in government, and in public service who—like us—want to do more that is worthwhile, and to do it better, easier, and cheaper. If we do our job as teachers, scientists, and engineers and maintain our faith with you, and with your sons and daughters, we, too, will be counted among those who serve our Country in these times.

"In plain talk, *what do you say?*"

Thank you, professor, for a well-written story. Now, still on the shortage subject, let's turn to a different approach. Let's say hello to Engineer Charles Elcock, Pennsylvania SPE

Here is his story and he calls it "The Retired Engineer's Place In Industry." O. K., Engineer Elcock, it's your typewriter.

"Much is heard today of the shortage of engineers and the need for more technically trained men in industry. This fact is generally recognized and the various technical societies have taken appropriate action to encourage more students to take engineering courses and to encourage technically trained men to fill the void.

"The first objective — encouraging young men to take engineering courses—is a proper step, looking to the future, but does not satisfy present needs.

"The second objective — getting more technically trained men to take part in industrial expansion — involves the need for shifting technically trained men from non-technical jobs to technical jobs. Since most men, in their most active years, dislike shifting about, it becomes necessary to place more reliance on the retired engineer, who, because of age and not by reason of inefficiency, has been cut off from active practice by an arbitrary date line.

"The full use of the retired engineer, in this emergency, requires some education of industry and also of the retired engineer.

"Industry should recognize—

"(a) that the retired engineer will bring a wealth of experience, has learned how to work hard and will be a steadying influence;

"(b) that it will be necessary to set up some system of excluding the retired engineer from the pension systems, now common in many companies;

"(c) that many engineers, over 65 years of age, are endeavoring to earn 18 months of covered employment to satisfy social security requirements for lifetime compensation;

"(d) that many retired engineers are only able to accept part-time employment, either because they have other interests requiring part of their time or because of health. Many retired engineers have enough to live on and feel no compulsion to sacrifice all the leisure time they have gained by retirement. It is true, however, that many retired men, regardless of their wealth, soon tire of their freedom and are anxious to get back in harness again, for at least a part-time job.

"The retired engineer or technician needs some advice, too:

"(a) He must avoid the attitude that he is through and unwanted.

"(b) On the other hand, he must be willing to take positions of less responsibility and lower pay than he had before retirement.

"(c) Engineers or others retired by Civil Service under the U. S. Government or from state or municipal positions, should understand that by working for 18 months on a job covered by social security, they can retire again and receive compensation from social security up to $80 per month for life. This will be in addition to retirement pay received from U. S. Civil Service or retirement pay from state or city. In fact, almost anyone who reaches the age of 65 and has not previously worked in jobs covered by social security can now become eligible by working 18 months in a covered job.

"The medical profession has indeed worked wonders in keeping people alive and efficient at advanced ages. It seems that recognition should be given to the fact that times have changed.

"During this shortage of qualified engineers and technicians it behooves industry and the oldsters to get together for the betterment of both and for the patriotic reason that the Nation needs the additional help that experienced men can supply."

Thanks, Engineer Elcock, and with your interesting review we've got to close up shop until next month. But first, thanks for your letters on this new feature — keep them coming, we'll use many of them next time.

—The Editors.

Report Shows Lack of Funds Limits Essential Programs

Acting on Request of Board of Directors, Special Committee Reviews Financial Picture of NSPE

BECAUSE of inflation in all phases of our current economy, together with an ever-increasing program for the National Society of Professional Engineers, its Budget Committee, in reviewing the financial status of the Society and in preparing the Budget for the calendar year 1952, found it necessary to exert every economy possible in order to present a budget which would be within the anticipated income of the Society. The Board of Directors at their 1951 Fall Meeting was presented this information and was asked to act upon Resolutions presented by two Member State Societies requesting the Board to increase the National dues.

As the result of these considerations, the Board of Directors requested a Special Committee composed of the Chairmen of the last three Budget Committees, the Chairman of the Public Relations Committee, and the Executive Director, *to present a report on the financial status of the National Society*. In response to this action, the following report is presented.

This report will not deal with the general activities of the National Society of Professional Engineers, since they have been presented in Annual Reports of the Society, copies of which have been sent to each member. Instead, the report will endeavor to give a very brief review of some of the elements which must be considered in evaluating the financial status of the Society.

First, slightly over 97% of the income of the Society is received directly from the members through dues. The nature of the Society's activities does not immediately present sources of other income, with the possible exception of revenue from advertising in the AMERICAN ENGINEER. The Society is diligently working to increase this potential source of revenue, but experienced advertising people tell us that appreciable income cannot be expected from this source for several years. In the meantime, such income as may be produced will of necessity, have to be used in the promotion of the AMERICAN ENGINEER as an advertising medium.

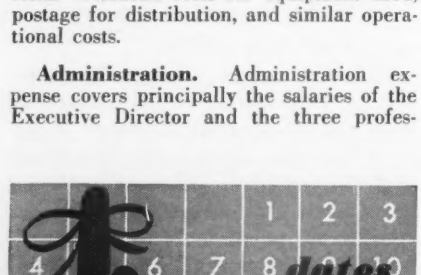
It should also be noted with pleasure that the EIT membership in the National Society has doubled in a little over a year. This membership is to be encouraged to the fullest extent possible, but it must at the same time be remembered it presents a financial burden. Of their $3.00 annual dues, $2.00 covers a subscription to the AMERICAN ENGINEER and the remaining $1.00 barely covers the costs of record keeping, etc.

The Society is currently conducting an extensive Public Relations Program as the result of the contributions made from the membership received from a campaign conducted during 1951. The funds thus derived will permit a continuation of this program through 1952. The expenses of this program are being maintained independently of the over-all Society Budget and will, therefore, not be considered in this report.

How the Society's Funds are Spent

Committee Activities. The financial report of the Society shows expenses under this heading which are directly attributable to activities of the committees of the Society. Also listed are costs incident to the development of the *activity*. In many cases these costs represent the out-of-pocket expenses for printing materials, reports, and services rendered by the activity. Expenses do not include staff salaries, Washington office clerical assistance in developing material overhead costs for equipment used, postage for distribution, and similar operational costs.

Administration. Administration expense covers principally the salaries of the Executive Director and the three professional people on the headquarters staff. Each of these assistants to the Executive Director holds a dual job—the Legislative Analyst acting as Executive Assistant; the Editor of the AMERICAN ENGINEER, also responsible for all public relations activities; and the Business Manager of the headquarters office also acting as Business Manager of the AMERICAN ENGINEER.



Illinois Society of Professional Engineers—Annual Meeting. April 3, 4. Pere Marquette Hotel, Peoria.

Michigan Society of Professional Engineers—Annual Meeting. April 18, 19. Hotel Hayes, Jackson, Michigan.

New Jersey Society of Professional Engineers—Annual Meeting. April 24, 25, 26. Essex House, Newark.

New York Society of Professional Engineers—Annual Meeting. May 1, 2 and 3. Hotel New Yorker, New York.

Corporation of Professional Engineers of Quebec—Annual Meeting. May 14, 15 and 16. Chateau Frontenac, Quebec City.

California Society of Professional Engineers—Annual Meeting. May 15, 16 and 17. Biltmore Hotel, Los Angeles.

Pennsylvania Society of Professional Engineers—Annual Meeting. May 16, 17. William Penn Hotel, Pittsburgh.

Massachusetts Society of Professional Engineers—Annual Meeting. May 23, University Club, Boston.

National Society of Professional Engineers—Annual Meeting. June 5, 6 and 7. Tulsa.

Georgia Society of Professional Engineers—6th Annual Summer Outing. June 20 and 21. Radium Springs Hotel, Albany.

Operations. This covers the expenses incident to the maintenance of the headquarters office, together with services rendered to the membership. Much of the Society's activities are absorbed in this and the previous divisions.

The society has been able to provide increasing service from the headquarters office for a membership which has increased nearly 50% with the same number of staff people, largely by the use of efficient operation and machinery.

Servicing, as the headquarters office does some 26 committees, special representatives to seven to ten activities, 38 Member State Societies, nearly 300 Chapters and over 27,000 members, necessarily requires certain operating expenses.

Operational salaries represent the personnel cost for the ten clerical people in the headquarters office. With the exception of the addition of a staff writer to assist in the many details involved in the new public relations program, there has been no addition to the staff since 1949, and because of financial limitation none can be added.

A comparison made in 1950 of the ratio of staff members to total membership of various professional societies, shows that the NSPE ratio was better by three to one to that of any other professional society in the survey, as follows:

NSPE:
1 staff member for every 1 750 members
Engineering Society A:
1 staff member for every 360 members
Engineering Society B:
1 staff member for every 255 members
Engineering Society C:
1 staff member for every 732 members

Ratios among societies of other professions ranged from one staff member for every 172 members, to one staff member for every 1,000 members.

The headquarters office now accomplishes, at considerable saving to the Society, the reproduction and distribution of much of the material used in the Society's activities. The addressograph is, of course, used for all mailings, including the AMERICAN ENGINEER; the *Legislative Bulletin*; the *Public Relations News Letters*; various publications and memoranda to the State Presidents, State Secretaries, and National Directors; information such as special government orders and other items of interest to the chapters and special interested groups; news releases and public relations information to various news outlets; and the roster of engineering firms maintained in the headquarters office.

The multilith printing machine permits the headquarters office to print the Society's stationery; all of its internal forms such as transmittal forms; change of status cards; data cards; application forms; the ballot; membership literature; reprints of the AMERICAN ENGINEER; minutes of the National Society meetings; *Public Relations News Letters*; special reports; and, in some cases where time permits, special publications for member State Societies.

The headquarters office received in 1951 well over 35,000 pieces of first-class mail, and nearly 7,500 pieces of second-class mail. It dispatched to components of NSPE and in other mail activities over 33,000 pieces of first-class mail, and 19,000 pieces of second-class mail, exclusive of such general mailings as the *Legislative Bulletin* the AMERICAN ENGINEER, Annual Report, ballots and other items, which were handled outside the headquarters office.

AMERICAN ENGINEER expense is a substantial item, but is more than covered by the $2.00 subscription fee which is a part of each member's dues. Considering the $2.00 subscription fee, the magazine is self-sufficient. It does represent, as mentioned earlier in this report, a potential source of revenue. The Society is exerting ever-increasing efforts to develop this potential.

Board of Directors' Meeting expenses cover only transportation costs for one representative from each of the 38 Member State Societies and the expenses of the officers.

The Executive Committee usually holds one meeting between each Board of Directors Meeting, with the possibility of one or two additional meetings as Society business requires.

The Member State Presidents' Conference brings together the administrative head of each Society for discussion of common problems, the exchange of ideas, a focusing of attention on desirable additional activities of the local Chapters, State and National Societies, and a discussion of various administrative details in the smooth functioning of our three-level organization.

Activities Limited by Lack of Funds

The Budget Committee as well as other committees of the Society, has presented to the Board from time to time very worthwhile activities which have not been fully implemented because of lack of funds. Some of these activities will be taken up later as desirable extensions of NSPE activity. In 1952, it is obvious that there can be no expansion of activities with the funds available. There will, of necessity, have to be rigid economy in a number of current activities, and some steps have already been taken to limit desirable functions.

Opinion has repeatedly been expressed that it would be extremely desirable if more committees could meet. With NSPE spanning the country from coast to coast and from border to border, and with corresponding representation on committees, it is expensive to bring such committees together. It is also obvious that there are certain recommendations from committees which NSPE will be unable to implement in 1952. Some of these are the following:

1. **An aggressive membership campaign, including the development of membership material and implementation of the action of the Board of Directors in 1948 for the employment of a Field Secretary;**
2. **A number of surveys in the field of education for professional responsibility, various ethical practices, salary surveys, employment conditions, etc.;**
3. **Assistance to Member State Societies and Chapters in developing programs;**
4. **Continued activity with respect to public relations and Engineers' Week;**
5. **More aggressive legislative and governmental liaison; and**
6. **Participation of Special Representatives in various activities.**
7. **Elimination of a third Board Meeting each year. Elimination of the payment of per diem to National Directors when attending the two presently scheduled Board Meetings. The National Society functions as a democratic organization, its policies being determined by its membership through their duly elected National Directors. Reducing the number of meetings of these National Directors means that their review of policies of the National Society must, of necessity, be less fluid and informative than would be the case if more frequent meetings could be held.**
8. **It has been necessary to eliminate the State Secretaries' Conference, a very desirable meeting during which the administrative officers of our State Societies can adjust some of the difficulties of administering details of our three-level organization, as well as present ways and means of more efficient operation.**
9. **Official visits of Society officers will have to be curtailed in 1952. Increasing costs in many of the Society's expenses will make other economies necessary. Increased postage rates, increased printing costs, increased costs of supplies and labor, increase in transportation costs, all are contributing to making greater economies necessary.**

Additional Desirable Activities

There are a number of items already approved by the Board of Directors for which funds have not been available for implementation. The Committee has endeavored to place a cost estimate on some desirable items in order that the membership may better realize the costs of additional services.

A *third Board Meeting* would cost approximately $7,500 each year $7,500

A *State Secretaries' Conference* should be held every two years, at a cost of $3 500 per year $3,500

Public Relations—funds should be provided for the continuation of an aggressive Public Relations Program. It is estimated that $20,000 a year should be budgeted for this purpose $20,000

Roster—The need for a roster has long been felt by the membership. It is an expensive job. Although it is not felt that it would be needed each year, it undoubtedly should be brought up to date every three years. It is estimated that the roster would cost $25,000 for its initial preparation, and about $7,000 per year $25,000
thereafter to maintain it ..... $ 7,000

Reserve—A Financial Reserve for the National Society should be accumulated by allocation of at least 7.5% of the yearly income or approximately $13,000 to $15,000 per year .....$13,000-$15,000

Office Space—The Society is in a fortunate position with respect to the cost of its headquarters office space but, since office space is not under rent control, it is expected that this cost will increase in the near future. This, together with increased space necessary, means that future budgets should provide at least $5,000 more per year for office space ..... $ 5,000

There are several other items in the immediate future which are contributing to increased costs of Society operations. No specific amounts can be allocated to these costs, as they are too indefinite. Yet, they will be very pertinent considerations in the future budgeting of NSPE finances. Among them are items which have been mentioned before such as increased travel costs; increased costs of supplies, labor and equipment; increase in State Societies which, until such time as they become large enough to offset in dues the costs of servicing their membership, represent a liability; expansion of NSPE's activities in many fields as the Society becomes larger and is called upon for more and more service. This is particularly true in legislative and government liaison work, in information regarding the profession which must be secured through surveys, in service to the membership in the professional, economic and social fields.

To provide all these needed services will require an additional income of between $50,000 and $75,000 per year.

Summary

It seems apparent that if the National Society is to expand its activities to coordinate the National aspects of Professional Engineering, to assist the State Societies in strengthening and developing their potential, it will be necessary for additional financing to be secured. Until such time as an additional source of revenue can be found, such increase in financing would have to come from the membership. It is therefore apparent that if these services are to be provided, an increase in the dues must be authorized.

***(Editor's Note:* The complete dues report has been sent to each Chapter President for discussion at the local level.)**

Something to Say?

How to handle the many excellent contributions to the *American Engineer* has been a problem for several months. The comments are often too detailed for our "Letters" column, and the other types of material such as newspaper clippings, etc., would not be appropriate there, so this material is now carried in a NEW feature called "Professional Postscripts."

Look for it on page 20. You'll find short, interesting items that will appeal to you, the professional engineer. After reading the feature, will you let us have your comments about it, or better still, send us a "Professional Postscript?"

With Our Members . . .

GEORGIA OFFICERS—New Officers of the Georgia Society are, left to right: A. O. White, Jr., 1st Vice President-elect; Ray L. Sweigert, President-elect; John W. Lovell, 2d Vice President-elect. Back row: John H. Lopez, President; Raymond J. Gauger, Director-at-large; Orbie Bostick, National Director; Arley R. Walker, Treasurer; Homer S. Weber, Director-at-large-elect; and George M. Normandy, Secretary.

Georgia Society Names Sweigert Head For 1952-53

The Georgia Society held its annual meeting in the Atlanta Biltmore Hotel on February 19. President L. L. Dresser gave the main address.

The gathering had many distinguished guests. These included: G. S. P. E. President, John H. Lopez; Past N. S. P. E. President, Alan G. Stanford and Mrs. Stanford, William B. Hartsfield, Mayor of Atlanta, Ben W. Fortson, Jr., Secretary of State for Georgia, Dr. R. C. Coleman, Joint Secretary Georgia State Board of Registration, Wallace McRoy, President, Alabama S.P.E., George W. Race, President, South Carolina S.P.E. and Mrs. Race; Col. Blake Van Leer, President, Georgia Institute of Technology and Mrs. Van Leer; Cherry L. Emerson, Past Vice President, N.S.P.E. and Vice President, Georgia Institute of Technology, Francis Dupuis, Vice President, Alabama S.P.E. and University of Alabama, W. L. Lowry, Head of Civil Engineering Department, Clemson College, Clemson, S. C., Dr. Roy S. King, Past National Director, N.S.P.E. and Mrs. King.

New officers were elected for the 1952-1953 term (to assume office in June of this year). The new officers are:

President, Ray L. Sweigert; First Vice-President, A. O. White, Jr.; Second Vice-President, John W. Lovell; Treasurer, Arley R. Walker; Secretary, George M. Normandy; National Directors, Orbie Bostick and Roy J. Boston; Directors-at-Large, C. T. Baker, Homer S. Weber and Raymond J. Gauger.

Johnson Installed As New Head Of Queens Chapter

The Honorable James A. Lundy, Borough President of Queens, installed new officers of the Queens Chapter recently. Franklin J. Johnson is the incoming President. Announcement was made the all chapter members except one have currently paid their dues.

Engineering Students Should Be Exempt Duluth Attorney Says

If students with an aptitude for engineering are drafted indiscriminately for the armed services, the U. S. in the next generation will have neither a crop of engineers nor the nucleus for a crop.

City Attorney Harry Weinberg told the Duluth, Minn. council and members of the Arrowhead Chapter of the National Society of Professional Engineers in the council chambers that these students should be exempt from the army draft and dedicated to the service of their country as engineers.

Weinberg said, if necessary, engineering students could be placed under a separate draft to complete their education and then, on graduation, allocated to industry for the period of the draft.

He pointed out that Hitler, during World War II, called engineering students from the battlefields to complete their education, not because he held any fondness for the profession, but because he realized they could be of greater service as engineers than men of combat.

Weinroth Sparks Membership Drive In Washington, D. C.

Engineer Max Weinroth, Chairman of the Membership Committee of the District of Columbia Society of Professional Engineers, has undertaken a campaign of writing and congratulating each engineer registered under the new D. C. registration law.

At the same time, Engineer Weinroth puts in a plug for the District Society and outlines the objectives of NSPE. He has received 61 indications of interest from the first 300 registrants under the law.

Members of the District Society have been invited to hear General Alfred M. Gruenther, Chief of Staff at Supreme Headquarters of the Allied Powers in Europe, speak at the U. S. Chamber of Commerce Building, April 28. General Gruenther is General Eisenhower's chief assistant.

Pittsburgh Studies Proper Telephone Directory Listing

The Pittsburgh Chapter is devoting its current meeting to the problem of the use of the classified telephone directory by the professional engineer. The subject is important to all engineers because it concerns the ultimate acceptance of the public of the correct understanding of the title and the restrictions of its use to those persons who are legally qualified, chapter officers state.

Kings County Chapter Holds Symposium On Professionalism

The Kings County Chapter recently held a symposium on *Various Ways of Advancing the Engineering Profession.* Participants were: Father Macdonald, moderator; Dr. J. F. Krakauer, and Engineers John G. Noest, Arthur A. Vioni, Victor J. Yuppa, Harold E. Weeks, Francis L. Molanphy, William H. Byrne, Benjamin Saltzman, Gustave Mueller, Joseph Fertik, John McKeage, and Lester P. Hollingsworth.

Kansas Society Hits Membership Goal At Annual Meeting

Eighty-three members of the Kansas Society and 46 of their wives were registered at the Society's Annual Meeting at Kansas City, Kansas, Feb. 22-23.

Mayor Clark Tucker gave the address of welcome to open the meeting. Chairman Gerry Roush of the National Society's Public Relations Committee spoke on the aims of NSPE in selling professional engineering to America. Mr. Roush reminded his hearers that all NSPE members are "salesmen" for engineering in their home towns and must be good salesmen if the program is to succeed.

The Society reported that it had 302 members, going over the top of a membership goal of 300 set earlier in the year. A new chapter, The South East Chapter, was given its charter. Sharon Foster of Great Bend, reported on a movement to organize a chapter at Barton.

New officers were installed and President L. L. Dresser of the National Society spoke on "The Philosophy and the Responsibility of the Engineer to the Public." He invited all members to come to the annual meeting in Tulsa next summer and to attend an all-day barbeque at his ranch following the close of the convention.

Ann Arbor Chapter Elects D. S. Ling As '52 Leader

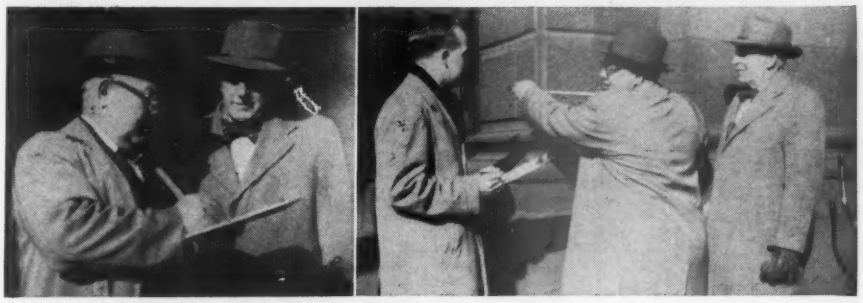
The following officers for 1952 have been elected by the Ann Arbor Chapter of the Michigan Society. D. S. Ling, chairman; H. E. Fetters, vice-chairman; W. E. Quinsey, secretary-treasurer; H. N. Barnard, state director; A. H. Lovell, alternate state director; and R. E. Townsend, R. W. Hodges, and A. F. Haven, members of the board.

Naval Guns Topic Of Commander's Talk At Fort Wayne

The Fort Wayne Chapter members recently heard a discussion of "Naval Ordnance Development" by Commander B. B. Pickett of the U. S. Navy. Cdr. Pickett is a graduate electrical engineer.

Philadelphia Chapter Makes Survey To Ready Quaker City for Bomb Attack

The Philadelphia Chapter of NSPE has, at the request of Mr. Samuel S. Baxter, Deputy, Division 4, Philadelphia Civil Defense Council, undertaken the survey of 25 of the estimated 150 blocks of center city Philadelphia to determine what buildings are adequate for shelter against atomic attack and also what buildings would be suitable for shelters with alterations.



Members of the Philadelphia Chapter have been making important contributions to Civil Defense Planning in the City of Brotherly Love. Right—Examining possible sites for bomb shelters is this team, typical of many sent out by the chapter. Left to right are: Frank Lazet, Herbert A. Russell, team captain, and William S. Wagner. Left—Team Captain Herbert Russell and William Wagner check off various buildings on their chart which might serve as possible refuges in case of atomic bomb attack in doing survey for Philadelphia Civil Defense office.

Allan H. Kidder, President of the Philadelphia Chapter, appointed Robert H. Merz chairman, and Archer G. Dean vice chairman, of a Committee of Center City Survey to organize and conduct the survey.

The membership of PSPE was asked to volunteer for the work of building surveys and over a hundred engineers volunteered. From these, eight teams were organized and team captains selected.

Basis of the survey was the instructions and forms issued by the Federal Civil Defense Administration,—Shelter Program.

Mr. Baxter's office furnished a blueprint of the Philadelphia area with the blocks marked off for the survey. He also furnished separate forms No. 122 for each building to be surveyed with the first six lines filled in giving the name of building, location, etc. Preliminary work included an "on the spot" survey by and the selection of only such buildings as were suitable for shelters.

The Committee and Captains met to be "briefed" on the survey as a whole and particularly on the instructions for the teams. Questions and answers were interesting, for example:

Introductions: NSPE cards were considered sufficient as the man making the survey also had Form 122 to show.

Refusal of admittance: There had been few of these as the public was aware of Civil Defense from newspaper articles and radio talks. Any refusal was referred back to the Captains to act with the Civil Defense Council assistance.

Owners evasion: Interviewers made their own entry from observation or guess and make a note. This might apply to the number of employees or occupants in the building.

Time for each survey: This was found to be from fifteen minutes up, depending on the size of the building. One difficulty was avoiding unnecessary details and explaining the entire Civil Defense program.

Team work: Some interviewers worked alone and others worked in teams of two. This was optional.

Summarizing the number of square feet of shelter area and rating score was the second part of the survey. This was done by the Captain of each survey group with such assistance as he needed.

95% Of Rensselaer Members Turn Out To Hear Molineaux

At the January meeting of Rensselaer Chapter, Charles B. Molineaux, President of the New York State Society, visited and spoke to the Chapter on the work being done by the State Society.

The Chapter announced that a total of 95% of the membership was present at this meeting.

MOFFAT TUNNEL—View of Moffat Tunnel which has brought the Colorado Society into the news. The tunnel is 6.2 miles long and includes a 16 x 24-foot railroad tunnel, which has an apex of 9,242 feet compared with the 11,000-foot elevation of passes over nearby mountains.

The Colorado Legislature passed a resolution empowering the State Highway Department to make a study of the feasibility of converting the tunnel to joint auto-train use. To do so would save a 20-mile drive through the mountains. The Colorado Society volunteered to give its assistance to the Highway Department in a move that was widely reported in Colorado newspapers.

Arkansas Society Begins Crusade For Non-Political State Road Study

A resolution of the Arkansas Society, vigorously promoted by the State Society and various chapters, has been attracting wide editorial support among the newspapers of that state.

Members claim that a non-political study of the state highway system would result in better roads at a lesser cost in the future. Many of the leading newspapers of Arkansas have gone on record as approving the project.

The resolution reads as follows:

We, the members of the Arkansas Society of Professional Engineers, as citizens, believe that the people of Arkansas deserve, and are capable of, a more efficient system of administration of public highways. As professional engineers, and as citizens, we believe that the necessary changes can be made. We also believe they can best be initiated by a non-political citizens group, after careful study, referring their solution directly to the people for approval and mandate in a general election, rather than placing the issue in any personal political campaign for elected office.

We know that most of the problems of administration of highways are engineering problems. In the public interest, therefore, we offer the services of a committee of our members, for engineering advice, to any non-political citizens group whose object is to offer the people, for their separate action, an impersonal unbiased plan for the efficient administration of the public highways.

California Meets May 15-17 at L. A.; Plan Progress Exhibit

The California Society announces that it will hold its annual convention in Los Angeles on May 15, 16, and 17, at the Biltmore Hotel. In conjunction with the annual meeting there will be an Engineering Progress Exhibit which will be open to the 15,000 registered engineers in the Southern California area.

Engineering Education Needs Greater Depth Boston Group Hears

"Engineering education must be given increased scope and effectiveness in the years that lie immediately ahead if the nation's critical needs for technological service are to be met," Dean William C. White, Director of Day Colleges, Northeastern University, told the Metropolitan Chapter of the Massachusetts Society of Professional Engineers at their meeting in Boston, February 20.

Speaking on Current Problems and Trends in Engineering Education, Dean White reviewed developments in engineering schools over the past decade and called attention to the recent report of E.C.P.D.'s Committee on Adequacy and Standards of Engineering Education which emphasizes the need for greater emphasis upon thoroughness and depth of training in the basic sciences, including mathematics.

"If the nation's manpower is to be utilized most advantageously in the current emergency, students must be guided into curricula which will serve them most effectively in terms of the students' abilities and objectives. We cannot afford the waste of effort that occurs when students choose unwittingly programs of instruction for which they are ill adapted and which they cannot pursue with profit," he said.

Dean White estimated that the number of professional engineers in the U. S. would likely be almost double the present 350,000 by the end of the next 20 years because of the many new fields now developing. He felt, however, that undergraduate curricula should be devoted to thoroughness in fundamentals of engineering method, mastery of the basic sciences, and general cultural development, leaving specialization to the graduate school or to later engineering practice.

Everett Lee Named To Schenectady, N. Y. City Planning Board

Everett Lee, Editor of the General Electric Review, and a long-time NSPE member, has been named a member of the Schenectady, New York, city planning commission. Mayor Archibald Wemple, in making the appointment, said Lee's willingness to serve on the volunteer post reflected credit upon him and upon the engineering profession.

Niagara Falls Chapter Sponsors Course On Job Psychology

The Niagara Falls Chapter of the New York Society is sponsoring a course on *Psychology as Applied to the Job Relationships of Engineers* in cooperation with Cornell University.

The course treats with understanding individual attitudes and behavior for more effective job relationships. Seven weekly meetings of an hour and a half each are scheduled.

Governor Appoints Four Nevada Members To Registration Board

Four members of the Nevada Society have been appointed to the State Board of Engineering Registration by Governor Charles H. Russell. They are: Harold W. Bishop, Dr. H. H. Houtz, Dean Stanley G. Palmer, and A. J. Shaver.

California Directors Favor Survey On Water Resources

The California Society's State Directors, meeting in Fresno recently, passed a resolution putting the group on record as favoring a proposed survey and report on the water resources and transportation problems of the Golden State.

NORTH CAROLINA ENGINEERS got together for their winter convention at the Sedgefield Inn at Greensboro on Feb. 17. Shown on these pictures are: (l. to r.) Dean Nathan W. Dougherty of the University of Tennessee, Vice President of NSPE; Dr. Fred C. Hubbard, Dr. L. L. Dresser (speaking), behind Dr. Dresser is Mr. R. B. Rice. Picture right shows Luther Lashmit, Dr. Dresser, Dean Dougherty (behind), Dr. Fred C. Hubbard, R. B. Rice, Rev. O. H. Folger and Dr. Irving Carlyle.

Commissioner Zurmuhlen Blasts Apathy Of Public Towards Crime and Scandals

Citing the nationwide Kefauver Senate Crime Commission exposures and the basketball and West Point cribbing scandals as examples of corruption in American life, New York's Public Works Commissioner Frederick H. Zurmuhlen, former NSPE Vice President, recently deplored what he termed "the common attitude that what a person can get away with is acceptable."

The occasion was the 23rd annual dinner-dance of Richmond County Chapter, Professional Engineers. Approximately 150 engineers and guests attended the event.

Zurmuhlen said, "Punishment is not being presented in its true and disgraceful light by the press and television. In fact, there are times when the culprits are excused and even glorified by both the press and television."

Carl F. Ettlinger was chairman for the event. Hugo Stenberg, President, was master of ceremonies. He introduced Charles Mitchell, former Kings County Chapter President; Theodore Koch, President of the Staten Island Institute of Architects; Maurice Uslan, former President of the architects' unit; William Larkin, former state President of the Society of Professional Engineers, and Pasquale Santoro, representing Borough President Hall.

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ILLINOIS' CAPITAL CHAPTER recently created a great deal of public interest in Springfield by holding an open meeting for the discussion of the pros and cons of fluoridation of the city's water supply. Representatives of the medical and dental professions joined the engineers in presenting expert opinion on the matter. One hundred and eighty persons attended.

The panel was made up of Clarence Klassen (member of Capital Chapter), who acted as Moderator; Dr. Julius S. Cass, of the Kettering Medical Research Laboratory at the University of Cincinnati; Dr. Winston H. Tucker, City Health Officer of Evanston, Illinois; Dr. J. A. Stocker, Sangamon County Medical Society; Dr. John Ketterer, Sangamon County Dental Society; and Carl C. Larson, Supervising Chemist for the City of Springfield.

Lamp Shade Wins Ladies' Hat Show In Central Arizona

The AMERICAN ENGINEER is indebted to Mr. Lloyd E. Martin, P. E., Sec.-Treas., of the Central Arizona Chapter for the following description of a style show in connection with Engineers' Week.

"Although the engineers' ladies went all out in designing and wearing hats depicting engineers and engineering, none won the prize," Engineer Martin reports. "It was won by a lady in another group who simply wore a lamp shade."

New York City Host To Annual Convention May 1-3

New York Society will hold its annual convention May 1, 2, and 3 at the Hotel New Yorker in New York City. Plans are being made for a bang-up meeting.

Mayor Impelliteri will welcome the members at the Thursday noon luncheon. He will be introduced by Commissioner Zurmuhlen, P.E. Commissioner Huie will be the principal speaker and will discuss the "New York City Water Supply Problem." Edward J. Nunan, P.E., and First Vice President, will act as Toastmaster.

T. K. Glennon, Engineering Commissioner of the Atomic Energy Commission, will be the guest speaker for the Symposium. It is expected that the A.E.C. exhibition on Atomic Energy will be displayed.

Michigan Society's Convention, April 18-19, Held In Jackson

The Michigan Society will hold its annual meeting at the Hayes Hotel in Jackson, April 18-19. A. F. Plant, State President, will preside.

NSPE President L. L. Dresser will speak on "The Professional Engineer's Philosophy and Responsibility." C. J. Deigert will lead a symposium on "Registration of Engineers in Industry."

Other symposiums will be held on "Legislation" (J. G. Martin, moderator) and "Effects of Material Shortages on Design" (B. P. Harrison, moderator). H. P. Seelye, Manager of Engineering for the Detroit Edison Company, will be the speaker at the Saturday noon luncheon.

Various dancing and social affairs and a complete program for the ladies has been arranged. Members wishing hotel reservations may obtain them by writing the Hotel Hayes, Jackson, Mich.

Alabama Group Meets To Organize Mobile Chapter

Members of the Alabama Society recently held a meeting of professional engineers in and around Mobile to formulate plans for establishing a chapter at Mobile. W. J. McRoy, President of the Alabama Society, led the discussion. C. L. Cookson was made Chairman of a Steering Committee. Committees were formed on Nominations, Constitution and Membership.

California's East Bay Chapter Elects New Officers For 1952-53

The following officers were elected by East Bay Chapter of California to serve for 1952-53: President, Harold Johnson; 1st V. P., Ray Fuhrmann; 2d V. P., Maury Ridker; Secretary, Ed Meneley; Treasurer, Earl Hesse; Executive Committee: Wilson Pritchett, George Schumann, James Moynihan; State Director, Earl Buckingham.

Wisconsin Accepts Annual Meeting Bid From Western Chapter

R. C. Clark, President of the Wisconsin State Society, has announced that the invitation of the Western Chapter of LaCrosse, has been accepted and that the Badger State's annual meeting will be held there this summer.

At a meeting of the Western Chapter, plans were made for an engineering vocational guidance program for interested high school seniors in La-Crosse and adjacent counties.

Bucks County Chapter Gets Charter; Already Has 52 Members

The Bucks County Chapter of the Pennsylvania Society was recently presented with its charter by Engineer Ezra K. Nicholson of Philadelphia, Vice President of the state society. The charter membership is 52 and is continuing to grow. Robert D. Brooks of Bristol, Pa., is the first head of the new chapter.

CALLING ALL CHAPTERS AND STATE SOCIETIES!

***The American Engineer* is anxious to cover all of your events of general interest and help you publicize annual meetings, especially deserving projects, and professional activities. But we need *your* help to do it.**

Covering 300 chapters and 38 state societies is a tough job. Why not put *The American Engineer* on your mailing list for chapter publications and see that we receive reports of your activities? Don't leave this to George. Take it up yourself at your next chapter meeting.

NSPE President-Elect Coleman Pays Visit To Blacksburg Chapter

The Blacksburg Chapter of the Virginia Society met on the campus of Virginia Polytechnic Institute recently.

Many distinguished guests, visiting the VPI campus in connection with the Engineering Emphasis Program, were present. Among these were: John D. Coleman, President-elect of the NSPE; Maynard M. Boring, Manager of the Technical Personnel Service Department, General Electric; Harold Goldstein, U. S. Bureau of Labor Statistics; James A. Rives, last year's President of the VSPE; E. G. Grigg, Manager Circleville Lamp Works, General Electric; G. B. Peasley, Consulting Engineer, Richmond.

The main speaker of the evening, Mr. Coleman, said that he felt the coincidence of National Brotherhood Week and Engineer's Week with Washington's Birthday was significant for engineers. The important professional aspects of which each engineer should be conscious were then discussed. One of the most important of these, he felt, should be the concern for the welfare of the young engineer and for the colleges. This responsibility is well expressed in the aims of the VPI Association for the Advancement of Engineering, he said, which he intends to discuss and recommend for other colleges.

The present great demand for engineering science offers a unique opportunity for the advancement of the profession, Mr. Coleman said.

Aidlen Writes Book On Passing N. Y. Registration Exam

S. S. Aidlen, P. E., has collected his lectures before the Kings County Chapter into a book giving pointers on preparing for the engineering license examination in New York State.

The book is currently in use at the Brooklyn Polytechnic Institute, Stevens Institute of Technology, Bridgeport Engineering Institute and other engineering schools.

Entitled *Professional Engineering Economics and Practice*, the book contains an analysis of problems by type as given by the New York State Licensing Board over 10 years. The book can be obtained by writing Mr. Aidlin, c/o the Kings County Chapter, 117 Remsen Street, Brooklyn 2, N. Y.

PRESIDENT-ELECT John Dawson Coleman of Dayton, Ohio, talks with young engineers of the Blacksburg Chapter at Virginia Polytechnic Institute. Left to right: R. L. Smith, H. C. Sweeney, R. T. Nethkin, Mr. Coleman, J. D. Cantor, C. A. Mayes, D. R. Boynton, and J. H. Sword.

Engineers Must Fight For Free System, L. L. Dresser Says

Engineers have an obligation to "fight for freedom of enterprise, fight for support of the needy and against subsidy to the lazy and laggard," L. L. Dresser of Tulsa, president of the National Society of Professional Engineers, told the Fort Smith (Arkansas) Engineers club.

"We are selling ourselves down the river to socialism through taxation," Dresser said. "The national budget for 1952 is greater than the total income of all the people west of the Mississippi river, plus the people of Minnesota and Mississippi.

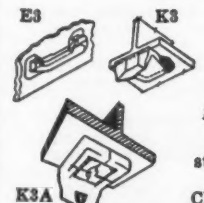
"Have you ever thought how many days you work to pay your taxes? I worked 225 days last year to pay mine."

Ross Nominated For President Of Massachusetts Unit

The following have been nominated for office by the North Shore Chapter of the Massachusetts Society: President, George A. Ross; Vice-President, Charles B. Fontaine; Secretary, James W. Apperson; Treasurer, Lester W. Burton; Membership Secretary, H. Martin Beede; Director, Klate M. Holt.

Massachusetts Society Sets Annual Conclave In Boston, May 23

The Massachusetts Society will hold its annual meeting in Boston, May 23. General Raymond A. Wheeler, U. S. Army (retired), engineering adviser to the International Bank, will be the principal speaker.



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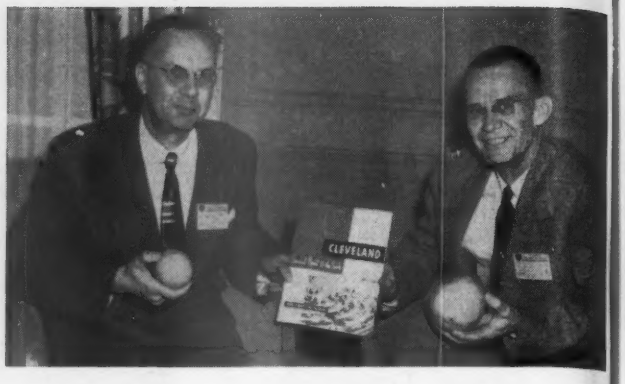

Above: General view of State Presidents' Conference. Right: It can and did happen in Cleveland! California and Florida State Presidents meet peacefully at Conference. On the left is President Kenneth D. Harrington, Los Angeles, and on the right, President Stanley Warth of Jacksonville.

Presidents Meet

(*Continued from page* 19)

Report; we want to get our message across."

Roush went on to tell the State leaders that their Chapters would receive publicity kits to help in publicizing the Report at the local level.

He urged that the Second Questionnaire on "How To Improve the Utilization of Engineering Manpower" be given wide distribution. Information gathered by the Questionnaire will also become the basis for a Report, he said.

National Engineers' Week (*see page* 15) was discussed as an effective tool of public relations. Clarence H. Evans, President of Delaware, and Beverly E. Ryan, President of Arkansas, were among those who related their State's experiences.

The State Presidents, who met in Cleveland at the same time the Ohio SPE's held its 73rd Annual Convention, reviewed many aspects of interprofessional relations.

President Frank C. Mirgain of New Jersey and Lorin B. Allen of Tennessee explained actions taken in their respective states to deal with interprofessional problems, while T. Carr Forrest, NSPE Vice President, reviewed the selection and compensation of architects and engineers by the Defense Department.

The group heard Perry T. Ford, ex-NSPE President, and now Director, Engineering Services Division, Federal Civil Defense Agency, explain the need for civil defense programs in the community. He asked the engineering leaders to help the Fedral agency carry out its mission of protecting the citizens against attack.

President R. E. Argersinger of Massachusetts briefly reviewed the work of the Massachusetts Society in the field of Civil Defense and offered to assist the government in doing a better job in the state.

Chairman R. J. Rhinehart, Pine Bluff, Ark., of the NSPE Registration Committee brought the group up to date on the subject of registration, while Clarance T. Shoch, Allentown, Pa., Chairman, Legislation Committee, reported on the legislative activities in Washington.

Mr. Robert E. Allen, Dayton, O., Nat'l Director from Ohio, and Chairman, NSPE Young Engineers Committee, reviewed programs for Engineers-In-Training and young engineers, for the visiting Presidents.

"We must carry out an aggressive program with these young people," Mr. Allen said, "if we want them to get their professional sea-legs. They depend upon us for guidance, and we are falling down on the job if we don't do all we can to help them out."

Vice President John F. Reynolds, Jacksonville, Fla., led the discussion on ethical practices. President C. E. Doell of Minnesota, and President-elect Ezra Nicholson of Pennsylvania, explained the problems their Societies had in endeavoring to get proper listing for professional engineers in the telephone book. President S. Warth of Florida reviewed the experiences his Society had with the telephone companies, as did presidents of several other States.

Vice President T. Carr Forrest, Dallas, Texas, outlined the financial status of the National Society to the group. As head of the NSPE Budget Committee, he told how inflation had made serious inroads into the finances of the Society (*see page* 22), and how important programs were being curtailed because of lack of monies.

Ohio Society Is Perfect Host

The venerable Ohio Society, holding its 73rd Annual Convention at the time of the State Presidents' Conference, was a perfect hosts to its guests. Invited to attend all of the outstanding social functions of the Ohio group, the State Presidents' thoroughly enjoyed their "off-hours."

The social program began with a luncheon for the engineers and their ladies on March 13. A luncheon on March 14, was followed that evening by "The Jamboree" sponsored by the Cleveland Society of Professional Engineers.

A luncheon on Saturday, March 15, was held and the festivities were climaxed in the evening by a banquet. The meeting of the State Presidents and the Ohio Society ended with a dance.

(A complete story of the Ohio meeting will appear in "With Our Members" in the next issue —The Editor.)

N.S.P.E. Officers

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Dresser Engineering Co., Box 2518,
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Engineers' Week

(*Continued from page* 18)

Leo M. Zamore and Daniel J. Houlihan.

The Engineers' Week meeting of the Albany Chapter included a talk by John L. Harvey, P.E., who spoke on the subject "More Power from Niagara."

NEVADA SOCIETY

A special dinner meeting of the Southern Nevada Chapter of the Nevada Society of Professional Engineers was held February 22.

During the dinner the group listened to the talk given by C. C. Boyer, City Engineer of Las Vegas, over radio station KLAS. Mr. Boyer gave a resume of the activities of the City Engineers' Office and described in detail the engineering work attendant to an Improvement District.

Oscar J. Scherer, the other speaker of the evening, outlined the part played by the professional engineer in the American Scene. On the occasion of Engineers' Week, he reminded the group that public srvice was a part of the ethical obligation of the professional engineer.

NORTH DAKOTA SOCIETY

Part of the activities of Engineers' Week in North Dakota included a speech by the immediate past president of the National Society S. L. Stolte before the college of engineering convocation at Grand Forks. Mr. Stolte told the group that "the outstanding abilities of the father of our country as a soldier, statesman and agriculturist generally are well known and probably overshadow his work as an engineer. However, history recorded that George Washington did outstanding work as an engineer—work that we in the profession can still be proud of."

OHIO SOCIETY

In the Akron and Cleveland areas, comes word from D. W. Converse, past president of the Akron District Society, regarding Engineers' Week activities in the area. Besides several beautiful window displays in the city of Akron, many radio programs were scheduled as well as outstanding newspaper publicity. A radio script, "Leap in the Dark" was presented over station WHKK, the play being done by the professional engineers Toastmasters Club of Akron. All members of the Club are members of NSPE. The Cleveland Chapter presented a television program over WEWS on February 17th.

Here is EW Committee Head E. E. Sanderson reporting for the Franklin County Chapter, Columbus:

"It is impossible to acknowledge all the chapter members who spent countless hours in the preparation of window displays, publicity, radio scripts and programs and TV shows, not to mention special meetings. Special mention should be made of the chairmen in charge of the special activities who spent a great amount of time in carrying out their assignments so well. Earl Bader was responsible for the excellent publicity given us by all the local and neighborhood papers. Lowell Mast headed the group of young engineers who were responsible for the many excellent window displays. Frank Williams did a great job in arranging for and promoting the many radio and television programs and spot announcements. Lawrence Crawford spent a great amount of time and effort in the preparation of the 'Engineering Your Life' program broadcast over WBNS-TV on Sunday, February 17, and then there were our president and vice president, Floyd Redick and Ed Bischoff, who had a hand in everything and were always on hand when the 'chips were down.'

"One of the most gratifying things to the Engineers Week Committee was the wholehearted and enthusiastic support received from local industries and business houses, the local newspapers, radio stations, and city and county officials. Radio and television time conservatively estimated to be worth over $2,000.00 was given free to the chapter by radio stations WRFD, WOSU, WBNS and WHKC, and television stations WBNS and WTVN."

Here's how the Toledo *Times* viewed the Week on February 16 (A. E. Fryer was General Chairman of arrangements):

"National Engineering Week, which runs from tomorrow through Saturday, will be observed in Toledo with a series of displays, a university open house and a banquet.

"In several downtown stores and other businesses, models showing various engineering feats will be displayed.

"George Granger Brown, dean of engineering at the University of Michigan, will speak on 'Atomic Energy and Peace' at a banquet Thursday at 6:30 p.m. in the Commodore Perry Hotel. Another speaker will be Charles E. MacQuigg, dean and director of the college of engineering at Ohio State University.

"An open house will be held by the University of Toledo college of engineering Tuesday from 7:30 to 9:30 p.m.

"Sponsors for the events are the Toledo Society of Professional Engineers and the Toledo Technical Council."

OKLAHOMA SOCIETY

The Tulsa Chapter had window displays appearing in fifteen downtown locations. An extensive radio and television schedule was carried through nearly every day of the week, and included the play "The Leap in the Dark" personnel by the University of Tulsa speech department. Play was given on Sunday afternoon over station KOME. On the same day over station KTOL, our national president, L. L. Dresser and Engineer Ed Niebling were interviewed. To round out the many radio shows used throughout the week, on Wednesday, February 20 the "Dream Builder" was presented by the University of Tulsa students over station KWGS. On Station KOTV on Thursday, Colonel E. G. Hurb and Allan Craig were televised on the Chamber of Commerce program. Also of interest are the speeches given before many public service organizations by members of the Tulsa Chapter. These included many schools as well as engineering and public service groups.

PENNSYLVANIA SOCIETY

John P. Robbin, Executive Director of the Urbun Redevelopment Authority of Pittsburgh was the speaker at a dinner held during Engineers' Week by the Pittsburgh Chapter. The Week in Pennsylvania was proclaimed by Pennsylvania's Governor Fine, and during the Week Engineer Michael Baker, Jr. of the Pittsburgh Chapter appeared on station WDTV to announce the opening of Engineers' Week. Also appearing during the Week were Engineer Donald C. Peters, Vice President of the Pennsylvania Society who appeared on station WDTV to tell the listeners about Civil Defense. On February 19, Engineer Sara-Ann Lanz, member of the Pittsburgh Chapter, appeared on the same station, to tell the women of America how they can find a career in engineering. On Friday, February 22, Engineer George S. Richardson, also appeared on the station and told how engineers are planning and building our defense program. Lloyd R. Bowman, Chairman of the Public Relations Committee, Pittsburgh Chapter, spoke before the Johnstown Chap-

ter of the Pennsylvania Society at their Engineers' Week dinner and urged that all members of state and national society "perform the duty for which they were organized."

Midwestern Chapter, Pennsylvania Society. A special Engineers' Week meeting was held with Mr. John W. West, Executive Secretary of the Pennsylvania Society speaking to the group on "The Meeting of Engineers' Week."

Philadelphia Chapter, Pennsylvania Society. Five special citations were awarded by the Philadelphia Chapter at a special Engineers' Week luncheon. The citation for outstanding service were given to the Franklin Institute of the state of Pennsylvania, Engineers in Philadelphia city government service, the University of Pennsylvania, the Engineers Club of Philadelphia, and the Drexel Institute of Technology.

The Lehigh Valley Chapter participated in a half hour radio program which was prepared and presented by "Hank" Stoess, President; "Frank" Hersh, 2nd Vice President; Carl Kreidler, State Director and "Bernie" Blaisdell the capable Chairman of the Membership Committee. Also there were radio spot announcements throughout the Lehigh Valley during Engineers Week; there were at least 60 of these announcemnts. A participating Company also displayed attractive Engineers' Week exhibits in ten office show windows in various localities throughout Eastern Pennsylvania.

The Harrisburg Chapter carried on many outstanding activities during Engineers' Week. Displays appeared in 3 local stores and talks were given by members of the Society before 17 service club meetings. Those included in the speeches were engineers C. B. Hershey, Richard Lowry, Jr., H. J. Engel, Clarence Hanson, C. W. Whistler, J. W. Magoun, James Samson, E. D. Schwarz, Col. George Morris, D. R. Crowley, Jr. Radio programs were given over stations WKBO, WHBB, WCMB, and WHP, plus many spot announcements on all four stations. Newspaper publicity was very good, including both morning and evening papers.

From Reading, Pennsylvania comes word that the radio skit "Leap in the Dark" was done by the local little theatre group over station WHUM. Much work was done by the Reading Chapter with local high schools and clubs and 20 members volunteered to speak to these people. 15 minute addresses were given to high school students with great success. Very often the addresses were augmented by questions and answers period that stretched on to 2 or 3 hours. Many local windows gave spacious proportions to our Engineers' Week window displays featuring George Washington and in some cases, President Truman's proclamation of Engineers' Week.

New Castle, Pa., Mayor Edward A. DeCarbo proclaimed Engineers' Week. Engineer Russell H. Druschell reports that radio spot announcements were furnished by Engineer Ray Britton to radio stations in New Castle, Sharon, Butler, and Oil City.

One of the outstanding events of the celebration in the New Castle area was a speech by Mr. John T. West, Jr., Executive Secretary of the Pa. Society before the local Rotary Club. This was only one of many appearances made by Mr. John T. West throughout the state during Engineers' Week.

RHODE ISLAND SOCIETY

The smallest state in the union did not have by any means the smallest celebration of Engineers' Week. There were proclamations by Governor Dennis J. Roberts, and window displays in centrally located store and bank windows in the cities of Providence, Cranston, Pawtucket, and Woonsocket.

There was a TV slide over station WJARTV several times a day throughout the Week accompanied by brief talks as provided by the National Society. In addition to this the program "Leap in the Dark" was presented over various stations throughout the week. These stations included WRIB, WEAM, WTJB, WJAR, and WTRO. Chairman of Engineers' Week in Rhode Island was D. A. Ionata.

TENNESSEE SOCIETY

All members of the Knoxville Chapter of the Tennessee Society attended the annual meeting of the society in Nashville on February 18. Mr. James E. McDonald was Chairman of Engineers' Week activities for the Knoxville Chapter. Other activities took place throughout the state.

TEXAS SOCIETY

Taking first the work of the Bexar Chapter of the Texas Society, Engineer Charles E. Balleisen, Chairman of the Publicity Committee reports a dinner was held on February 22, by Chapter. With more than 150 engineers and their guests attending, the San Antonio group honored local dignitaries. The local Chapter President, Mr. Dan Campbell, presented a scroll of achievement to Engineer J. L. Dickson, who was selected as San Antonio's outstanding engineer of 1951. Other activities took place throughout the state. See March issue, AMERICAN ENGINEER.

WEST VIRGINIA SOCIETY

Governor Okey L. Patteson proclaimed Engineers' Week. A series of meetings were held at Charleston in the last two days of Engineers' Week with various engineering groups participating. This included a week long industrial exhibit, emphasizing the importance of coal, gas, oil and other of West Virginia's natural resources which have been developed through engineering skill. The exhibit was arranged in rotunda of the State Capital. Many industrial exhibitors participated in this event. For more information, see March issue of the AMERICAN ENGINEER.

NEXT MONTH

Senator George W. Malone of Nevada, the only registered engineer in the Senate, discusses "Will Atomic Energy Make the Power Engineer Obsolete?" Don't miss it!

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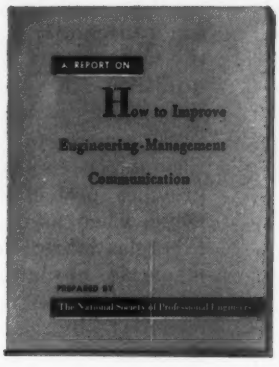

This Report on "How To Improve Engineering-Management Communications" Is Now Off The Presses and Being Widely Distributed—It Represents The End Product of the Program's *First Phase.* (See page 5.)

But . . .

Take Part Now In The *SECOND* Questionnaire-Report Project

The Second Questionnaire on the vital subject, "The Improved Utilization of Engineering Manpower," is ready to be sent to the people in industry, government, etc., *that you select.* Fill out the coupon now naming the person you want to receive the Second Questionnaire and later the Second Report that will be written from the facts gathered. Let someone know about YOU and your Society!

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2nd Report

What's New

As a service to our readers, this column will describe briefly new product developments of general interest to professional engineers. For further information concerning these products, we will appreciate your filling in the coupon provided for this purpose, and mailing it to the American Engineer.

● The Tracto-Lift is a fork lift that operates on rough or sandy ground. It combines the "go anywhere" of a tractor with the lifting power of a fork truck, and provides a speedy and efficient method of storing concrete products, construction and building materials.

By utilizing the heavy-duty industrial tractor with the large tires to give maximum flotation and tractive effort, and applying this principle to conventional fork truck efficiency, a unit has been built with ability to work in rough ground and sandy soils. This is made possible by the large, super-traction tires on the front of the Tracto-Lift. The tires are switched from original installation to give maximum traction in the opposite direction. The other modifications are the reversing of the transmission, tractor seat, steering mechanism, improvement of standard steering and the adding of counterweights on the rear to give maximum stability in handling heavy loads. As the load weight is increased the steering ease increases.

Another advantage of the Tracto-Lift is the underneath clearance. The minimum is 8 inches on the small or medium size Tracto-Lifts and 10 inches underneath clearance on the larger models. ***Item one.***

● The Hutchison Calculator, size 10″ x 10″ and printed on Vinylite, can be used to solve problems in high pressure gas pipeline flow, low pressure gas pipeline flow, simple oil flow, and flow of water in pipelines.

It will correct for the specific gravity of gas, pressure base in gas problems, and interval distribution in high- or low-pressure gas or water systems. The Hutchison Calculator will also give hourly or daily results for gas and oil. ***Item two.***

● Safway Steel Products, Inc., announces a self-contained, telescoping steel shore that is handled by one man and permits micro-adjustment.

A special sleeve nut design makes heavier load-carrying capacities to as high as 9,900 lbs. possible. No jacking devices or other separate accessories are required. For rough adjustment, the upper telescoping member is easily raised to the approximate height and held by inserting a pin through one of the holes in the tube. Final adjustment is then obtained by rotating a threaded sleeve nut, thus elevating the head to the exact height required.

The U-shaped head plate is designed for locating 4-in. lumber or lapped 2-in. lumber on edge. No nailing is required under normal conditions, but staggered nail holes are provided for use when desired. ***Item three.***

● Nerva-Plast Cold Setting Cement is a patented compound of rubber and selected asphaltic hydrocarbons, and on drying forms a tough, resilient, unbreakable, elastic film. This film always remains continuous and contiguous, impervious to water and moisture vapor penetration. The film retains its flexibility and excellent adhesive and cohesive properties under a wide range of temperature and climatic changes. Acids and alkalies, whether in the air or in insulating materials, have no effect on the waterproof and weatherproof qualities of this cold setting cement.

As a powerful adhesive and corrosion resistant coating, Nerva-Plast provides protection against the elements when used on aluminum foil, Fiberglas fabric, Foamglas, and 85% magnesia insulation materials. The product not only resists outside water effectively, but also acts as a complete moisture-vapor barrier. When applied to porous insulating material, it prevents loss of insulating properties and disintegration caused by moisture penetration.

Effective protection against the elements and corrosion is provided for outdoor piping and equipment by Nerva-Plast, a weatherproof and waterproof cold setting cement. The compound may be applied directly to the pipe, or used as an adhesive coating for heat insulating materials. ***Item four.***

● A new pulverizing mill, the Mead Mill "Pony" model, is powered by a 1 h.p. motor with an output of 50-100 pounds per hour. It will pulverize any dry, grindable material to specifications without damaging molecular structure.

The Mead Mill is an impact type pulverizer. Disintegration of the material being accomplished by throwing against impact surfaces, and by impact of the material against itself, during the process. Mill speed and fineness of the screen used determines size of grind for any given material. Horsepower is minimum in relation to production. ***Item five.***

● The Hart-Lock is a current carrying wiring device that locks in position and prevents accidental disconnects.

By a simple twist of the cap in the connector body or receptacle, it assures a positive lock. To disconnect, a simple reverse twist unlocks the device.

For long line assemblies, for overhead connections, for direct connection to machines and wherever cords may be subject to pulling in the operation, the Hart-Lock provides assurance of a constant current supply. ***Item six.***

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